# Petroglyphs: The Art of Ancient Landscapes

by Sean Keir Moriarty

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# Foreword

‘Petroglyphs: The Bend of the Boyne’ predominately explored the hypothesis that many of the panels of artwork found within the Boyne Ensemble, are ‘maps’ of the site as it existed during the Neolithic. While that hypothesis was applied to a number of other sites in Ireland, the UK and France, any hypothesis must undergo repeated testing. As such, this paper, which for all intents and purposes is an addendum to ‘Petroglyphs: The Bend of the Boyne’, addresses a number of points and observations not previously covered, as well as a number of additional sites, both in Ireland and the UK.

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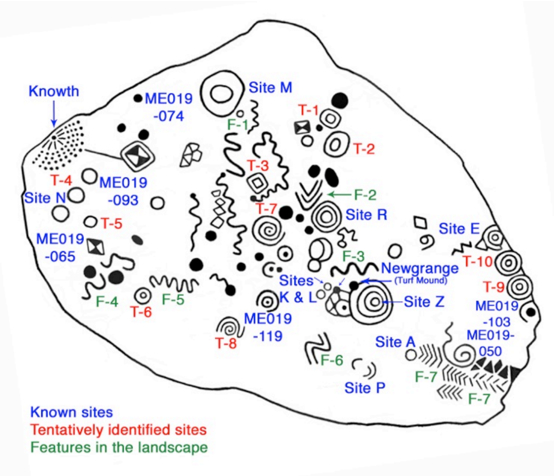
# Petroglyphs: The Art of Ancient Landscapes

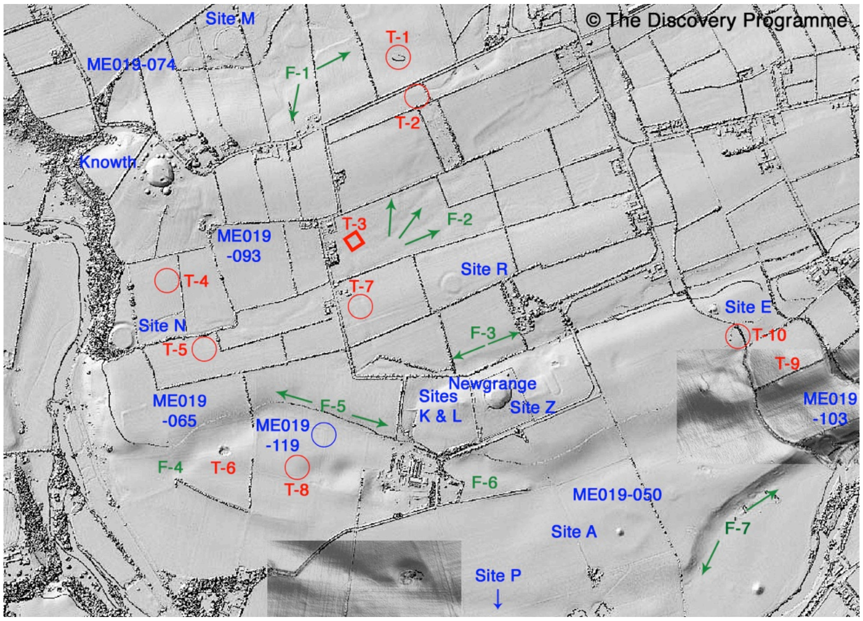
## Points and Observations

### Section 1: In the Beginning: Tara, Knowth, Newgrange & Stonehenge

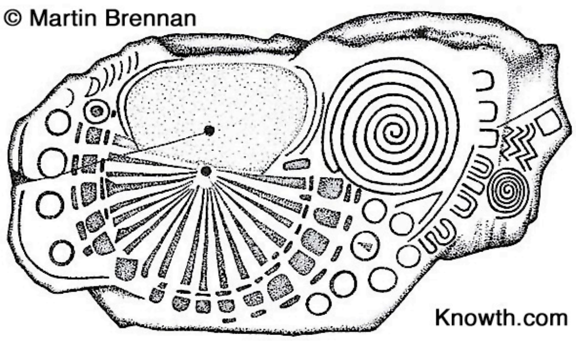
Though the crux of the hypothesis set forth in both 'Orthostat: The Mound the Hostages' (Moriarty, 2007) and 'Petroglyphs: The Bend of the Boyne' (Moriarty, 2010) is that the panels of motifs depict the monuments constructed at those sites, they just as importantly reveal, to some extent, the chronology of the sites and evolution of the monuments. Case in point is the life-sized solar array depicted on Kerbstone 15 of Site 1 at Knowth which, based on its depiction on Or. 8 within Site 14, was constructed prior to Site 1 and its satellite mounds. (Moriarty, 2010)



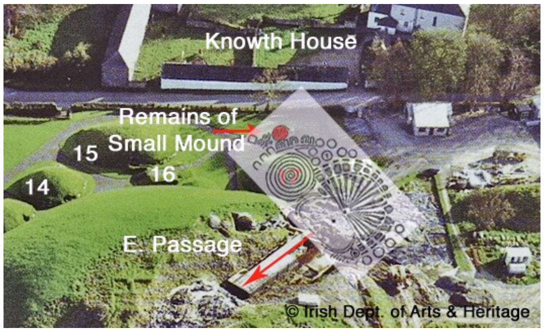
Rear panel on Or. 8, Site 14, Knowth



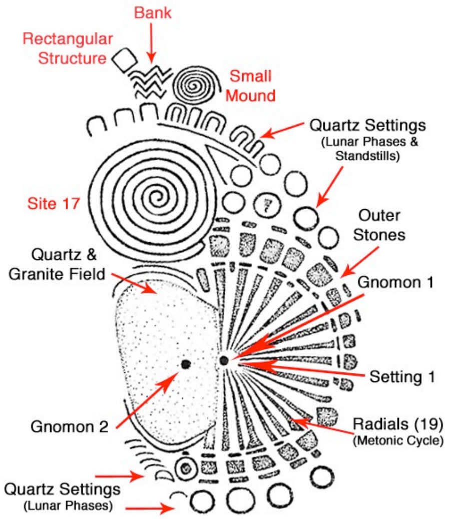
Lidar of the Bend of the Boyne

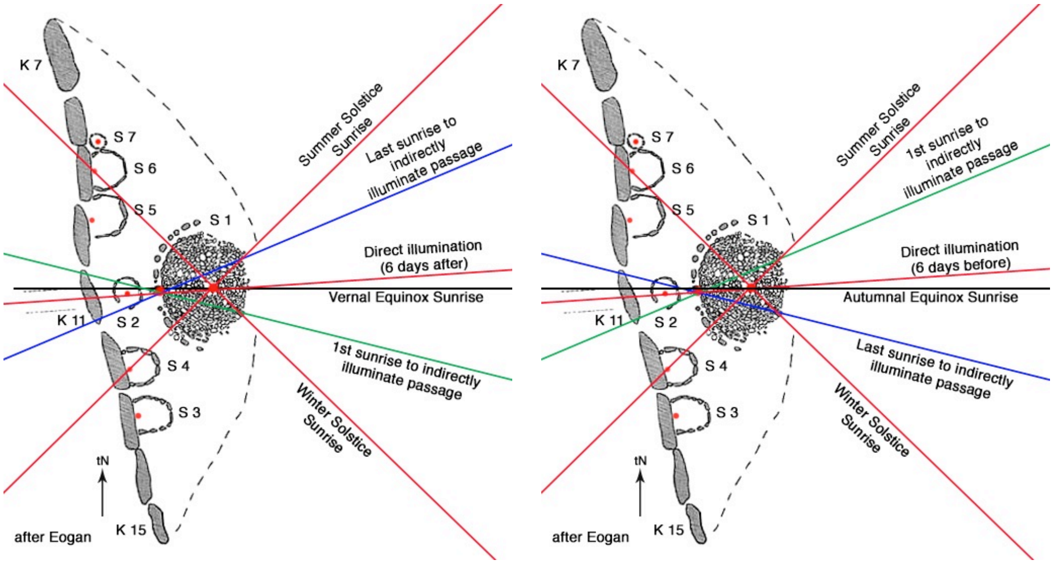


Kerbstone 15, Site 1, Knowth



Aerial of Site 1 with overlay of K 15

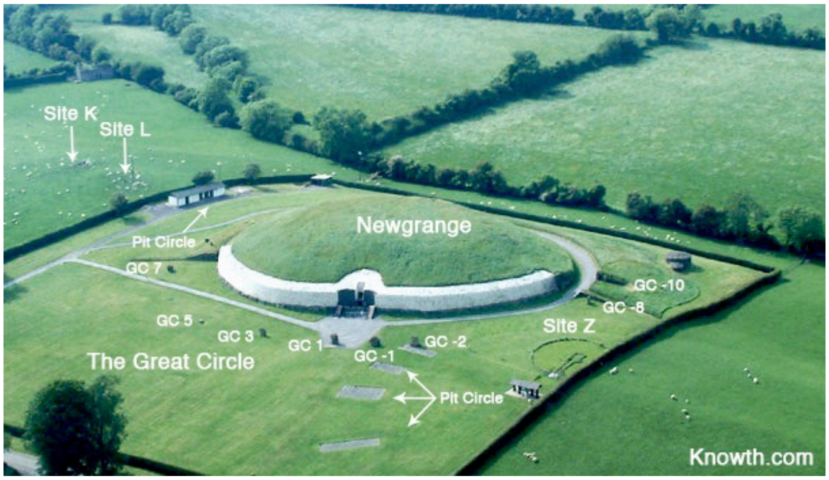



K 7
S 7
S 6
S 5
S 1
K 11
S 2
S 4
S 3
K 15
tN
after Eogan
Summer Solstice Sunrise
Last sunrise to indirectly illuminate passage
Direct illumination (6 days after)
Vernal Equinox Sunrise
1st sunrise to indirectly illuminate passage
Winter Solstice Sunrise
K 7
S 7
S 6
S 5
S 1
K 11
S 2
S 4
S 3
K 15
tN
after Eogan
Summer Solstice Sunrise
1st sunrise to indirectly illuminate passage
Direct illumination (6 days before)
Autumnal Equinox Sunrise
Last sunrise to indirectly illuminate passage
Winter Solstice Sunrise

Suggested method of operation

With regards to Site 17 and the small mound depicted on K 15, they were in all probability the first mounds to be constructed, though likely well-after the array had been in use for a century or more, the components of which would have been added over time. (Moriarty, 2010)

In contrast to Knowth, ‘The Great Circle’ at Newgrange, which was constructed prior to the main mound, (Moriarty, 2010) consisted of approximately 36 massive standing stones 2 – 2.5m in height and weighing several tons. Though the arrays at Knowth and Newgrange became obsolete upon construction of the main mounds, they nonetheless remained observatories, if for no other purpose than to mark the Vernal & Autumnal Equinox Sunrises/Sunsets and Winter Solstice Sunrise respectively.



**Aerial of Newgrange**

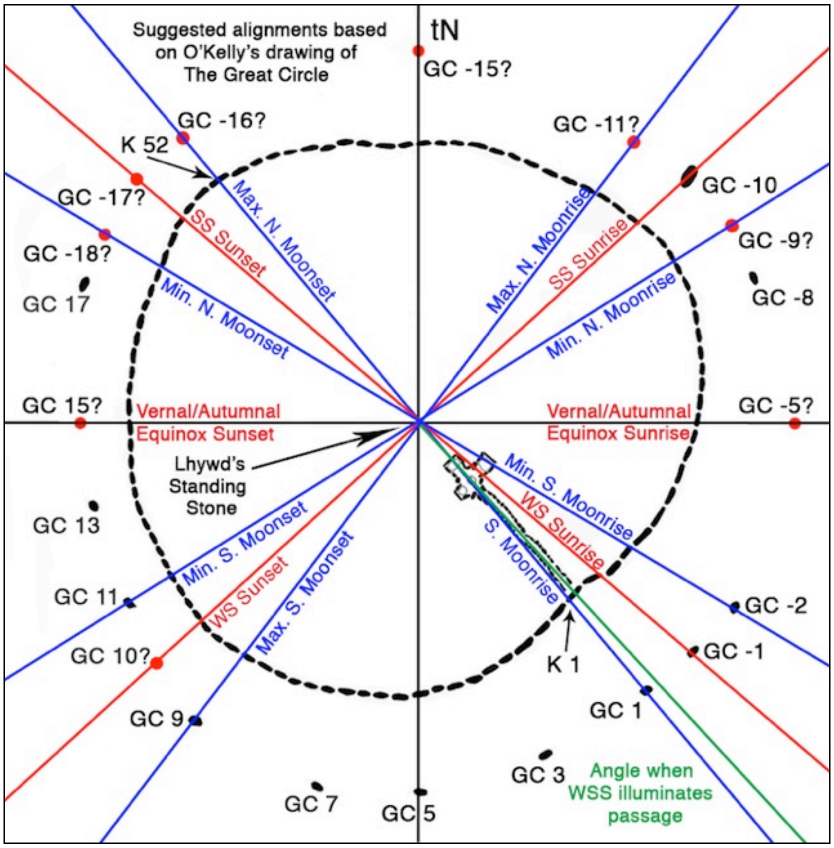


**Diagram of ‘The Great Circle’, Newgrange**

In view of the alignments of the passageways at Knowth and Newgrange, and that those alignments were calculated using the ‘dial’ at Knowth and ‘The Great Circle’ at Newgrange, it begs the question as to how those arrays evolved? In the case of the ‘dial’ at Knowth, it likely began as small stone markers placed atop the ground, whose arrangement could be adjusted as new observations were made. As for ‘The Great Circle’, making adjustments would have been extremely difficult and time consuming given the size of the stones, so it’s likely timber posts were initially employed to mark lunar and solar events.

Though Stonehenge is not a passage mound, with no known panels of art depicting the site, given its alignment to the Summer Solstice Sunrise, the evolution of the arrays at Knowth and Newgrange can be applied in determining its phases of development. Following are the ‘conventional phases’ of construction for Stonehenge. (Cleal et al., 1995)

**Phase 1: 3015 – 2935 cal BC**

- Construction of the ditch, inner bank and outer counterscarp bank of the henge.
- Digging of the fifty-six (56) ‘Aubrey Holes’, which were either left unfilled, or set with timber posts that were subsequently removed.

**Phase 2: 2900 – 2400 cal BC**

- Timber posts erected in the northeast entrance and center of the henge, stretching towards the southern entrance.
- Cremations placed in the partially filled ‘Aubrey Holes’, the upper ditch and on and just inside the inner bank.

**Phase 3i: 2550 – 2400 cal BC**

- Bluestones erected in the Q & R Holes, forming a pair of concentric arcs.
- The ‘Avenue’ is constructed.

**Phase 3ii: 2440 – 2100 cal BC**

- Construction of the Sarsen Circle and Trilithon Horseshoe.

**Phase 3iii: 2300 – 2000 cal BC**

- Features on the west side of the stone circle.

**Phase 3iv: 2270 – 2020 cal BC**

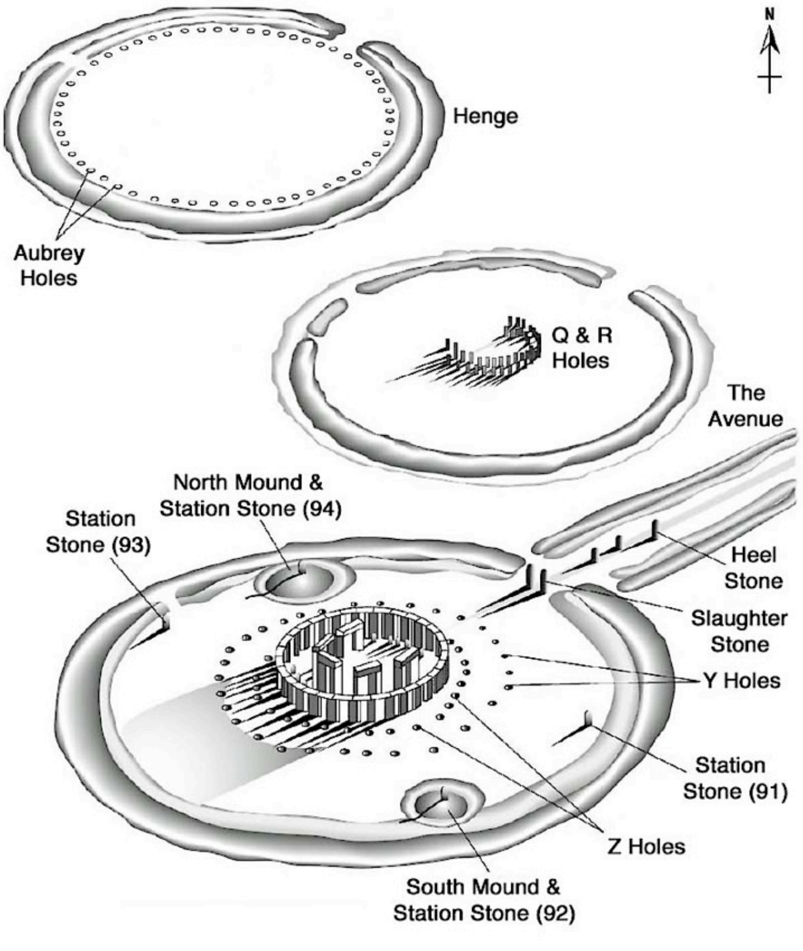
- Bluestones rearranged in a circle between the Sarsens and Trilithons, and in an oval within the Trilithon Horseshoe.

**Phase 3v: 2210 – 1930 cal BC**

- The stones in the northeast section of the Bluestone Oval are removed, leaving a horseshoe-shaped setting, mirroring the shape of the Trilithon Horseshoe.

**Phase 3vi: 2020 – 1520 cal BC**

- The sixty (60) Y & Z Holes are dug, presumably for Bluestones, which were left unfilled. (Z Holes, 2020 – 1740 cal BC & Y Holes, 1630 – 1520 cal BC)

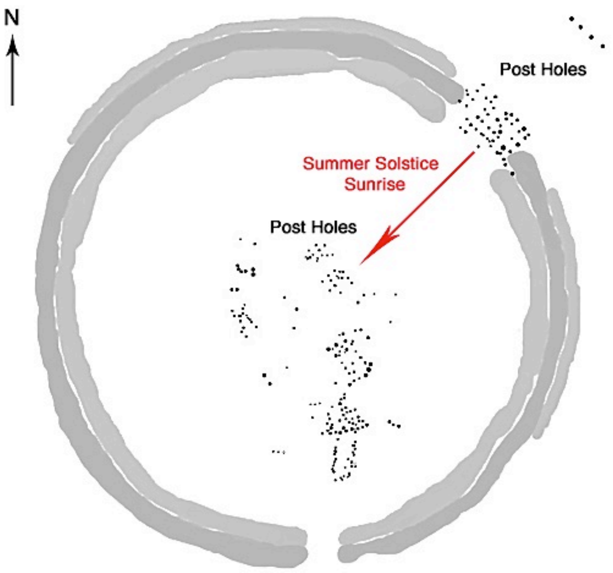


**Phases of Stonehenge**

Based on the evolution of Knowth and Newgrange, Cleal's 'conventional phases' and Parker Pearson's 'revised scheme' of Stonehenge are in all probability incorrect.

**Phase 1: 3530 – 3110 BC**

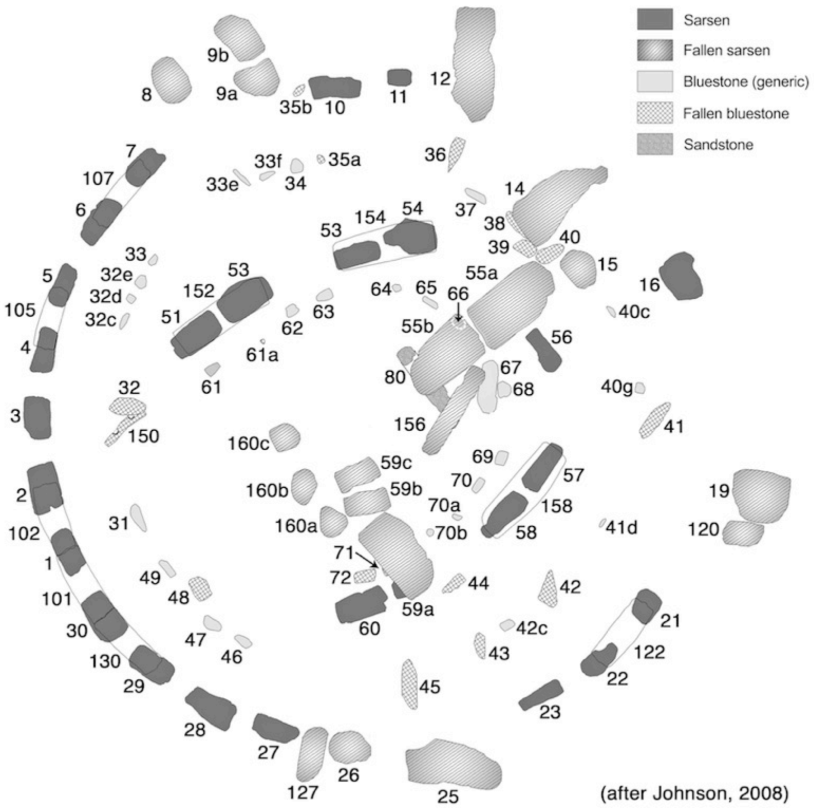
- The ring of timber posts at the center of the henge, were likely temporary markers for calculating lunar and solar events. This parallels the earlier phase at Newgrange, prior to the stones of 'The Great Circle' being erected. A stakehole was found on the western side of Aubrey Hole 7, so there are likely stakeholes within the immediate vicinity of the remaining fifty-five 'Aubrey Holes', provisionally marking their positions.
- The timber posts within what became the northeast entrance to the henge, marked the 'window' of the Summer Solstice Sunrise. That all the holes held posts concurrently is extremely unlikely, rather they were likely repositioned as new observations were made. It's believed the posts formed a passageway, (Parker Pearson, 2007 & 2009) or filter/screen, (Field & Pearson, 2010) either of which would have defeated the purpose of aligning the entrance of the henge to the Summer Solstice Sunrise.
- The postholes within the southern section of the henge, held the foundation timbers for a large house/hall (Parker Pearson, 2007 & 2009) which, like the timber structures at Knowth, would in all probability have housed the astronomers.



Phase 1 - location of postholes in relationship to the henge prior to its construction

The reason for suggesting this phase, is that the builders did not simply arrive on site and begin constructing any of the monuments, without first making countless astronomical calculations over an extended period of time, quite likely a century or more. It was this phase that determined the positioning of the stones within the 'Aubrey Circle' and its circumference. As no remains of rotted timbers were unearthed, this phase likely lasted less than 100 years.

It should be noted that a pig rib fragment found within Posthole 1884, between Stones 8 & 9, has been dated to 2580 – 2460 cal BC, and therefore the posthole has been assigned to the 'Timber Phase', either 2900 – 2600 cal BC, (Cleal et al., 1995) or 2900 – 2400 cal BC (Parker Pearson et al., 2007). The date establishes *"a terminus post quem for the infilling of posthole 1884."* (Marshall, Darvill, Parker Pearson & Wainwright, 2012) Given that the dating for construction of the Sarsen Circle, 2580 – 2470 cal BC (Pearson et al., 2007) matches that of the material, 2580 – 2460 cal BC, the posthole has been incorrectly assigned to the 'Timber Phase'. The logical explanation, is that the post was part of the 'scaffolding' used to either erect Sarsens 8 & 9 or its lintel, and that the bone fragment was deposited upon removal of the post.



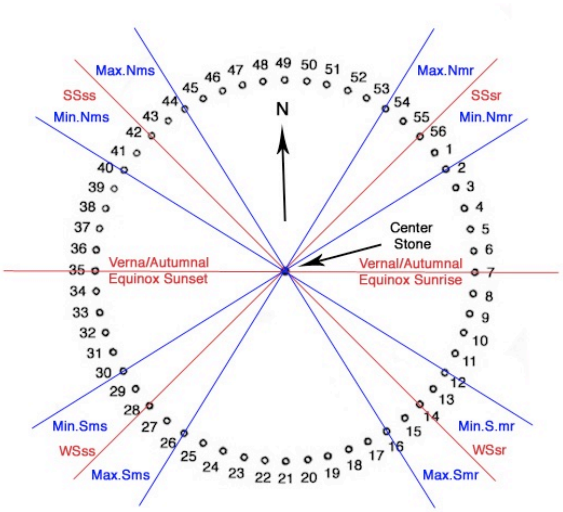
(after Johnson, 2008)

**Plan of Sarsen Circle & Trilithons, Stonehenge**

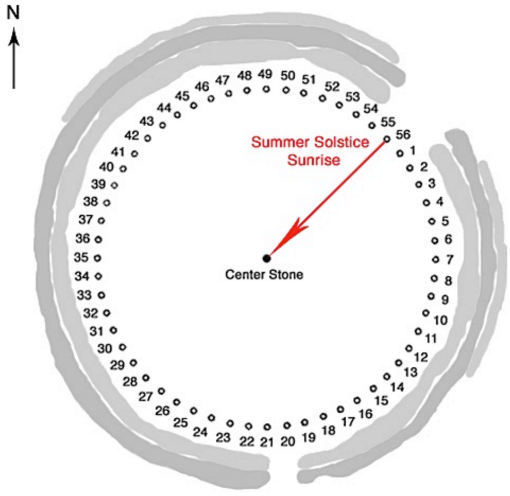
## Phase 2: 3430 – 3010 BC or earlier

- Fifty-six (56) Bluestones are erected within the 'Aubrey Holes', this based on the crushed chalk rubble found at the bottom of the holes, (Parker Pearson, Richards &

Pitts, 2008) with one (1) suggested Bluestone at its center. (see Phase 5i, page 14) It's this circle which dictated the circumference of the henge.



Phase 2 - Aubrey Holes with alignments



Phase 2 - Aubrey Holes in relationship to the henge prior to its construction

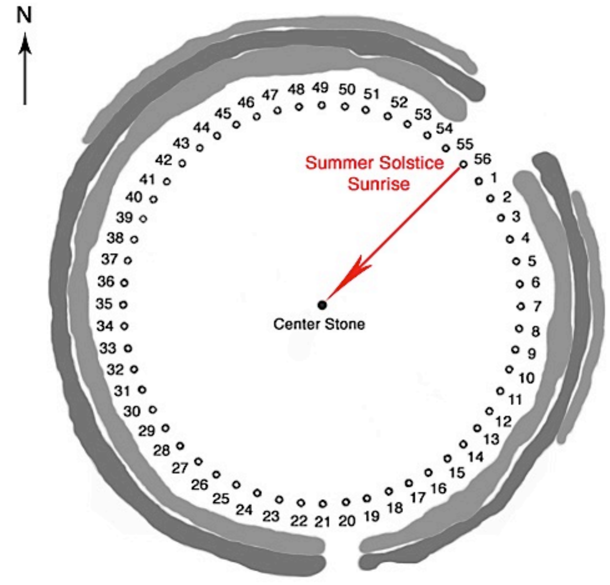
*"On the basis of the very limited evidence presently available, there is a 86% probability that the cremation in Aubrey Hole 32* [3080 – 2890 cal BC] *pre-dates the Ditch and a 98% probability that the cremation from next to Aubrey Hole 7* [3330 – 2910 cal BC] *is earlier. Hence there is an 84% probability that both the dated cremations associated with the Aubrey Holes are earlier than the construction of the Ditch. The possibility that the Aubrey Holes are part of activity that pre-dated construction of the Bank and Ditch* [3015 – 2935 cal BC] *has been suggested on the basis that the spacing in the circle takes no account of the northeast entrance. (Walker, 1995a, 107)."* (Marshall, Darvill, Parker Pearson & Wainwright, 2012) Based on the high probability that the Bluestones were employed to observe lunar and solar events, the stones were erected within the 'Aubrey Holes' at least 100 years prior to the earliest burials. (see Phase 4ii)

Given the radiocarbon date for the remains unearthed next to Aubrey Hole 7, (3330 – 2910 cal BC) the remains Hawley excavated from Aubrey Hole 7 would have predated those found next to it, perhaps by several decades. The immediate proximity of the two burials, would seem to indicate the individuals were members of the same family. However, *"Radiocarbon dating of the cremated remains interred in AH 7 will not conclusively identify the Aubrey Holes as pre-dating the construction of the enclosure, because AH 7 is known to contain all the cremated material that Hawley excavated from the Aubrey Holes, the Ditch and the back of the Bank."* (Marshall, Darvill, Parker Pearson & Wainwright, 2012)

- Twenty-five (25) Bluestones are erected in a circle at a site 1.6km (1 mile) southeast of Stonehenge, appropriately dubbed 'Bluestonehenge'. (Parker Pearson, 2010) *"The circle's construction can be dated by two flint chisel arrowheads (a style used around 3400 – 2500 BC) from the packing of the stoneholes."* (Pitts, 2010)

**Phase 3: 3015 – 2935 cal BC**

- The henge is constructed, consisting of an inner bank, ditch and outer counterscarp bank, with a large entrance in the northeast and a somewhat less defined entrance in the southern section.



Phase 3 - Henge is constructed

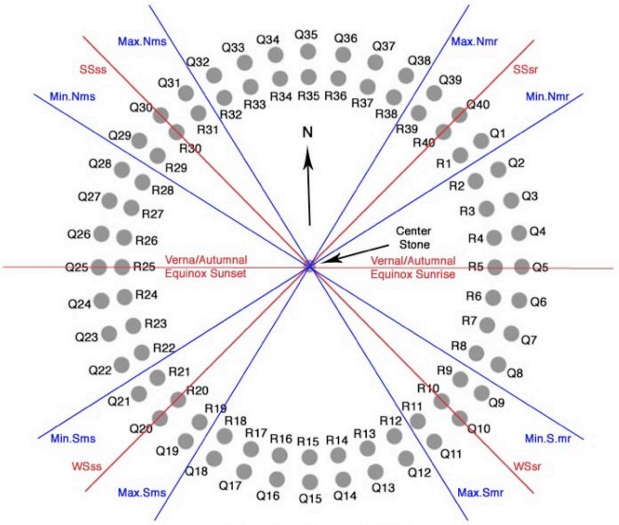
**Phase 4i: 3015 – 2935 BC (likely coeval with Phase 3)**

The reason for suggesting this phase is coeval with the construction of the henge, is that the henge would have interfered with any observations of astronomical events, as viewed from within the 'Aubrey Circle'.

- The fifty-six (56) Bluestones from the 'Aubrey Holes', the one (1) suggested centerstone, plus twenty-three (23) of the twenty-five (25) stones from Bluestonehenge are erected in the Q & R Holes. The two concentric rings each consisted of forty (40) stones. (Darvill, 2006) (Johnson, 2008) The centerstone was likely a small Sarsen, with the circles possibly graduated from short (R holes) to tall (Q holes) and given their shape, possibly aligned edge to edge. (see images, page 10)

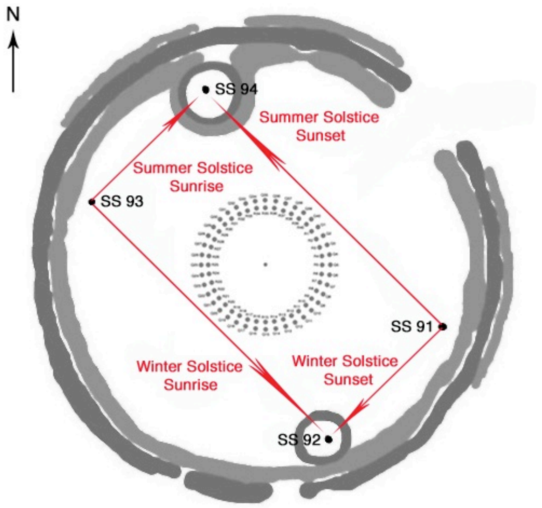
- Two mounds are constructed within the northwest and southeast sections of the henge. The two (2) remaining Bluestones became two of the four Station Stones; 92 & 94, and set atop the mounds, with the other two Station Stones, 91 & 93 being Sarsens, which remain in situ. The purpose of the mounds/platforms, was that observing any astronomical events would have been hindered by the henge, had the Station Stones been erected at ground level.

The foregoing accounts for the eighty-two (82) Bluestones believed to have been erected at Stonehenge. Though dismantling of the circle at Bluestonehenge is thought to have occurred around 2469 – 2286 BC, this based on the dating of an antler pick discarded on the ramp of one of the stoneholes after its removal, (Pitts, 2010) a more likely scenario is that the pick was discarded upon the builders completing construction of the earthen enclosure c. 2400 BC.

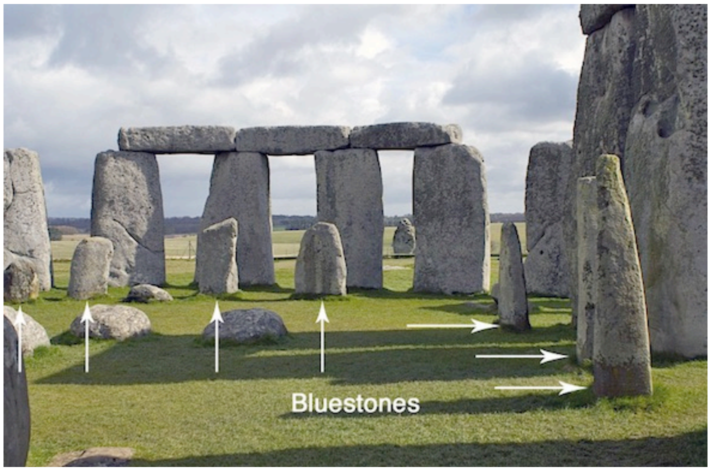


Phase 4i - Q & R Holes
with alignments

(after Johnson, 2008)

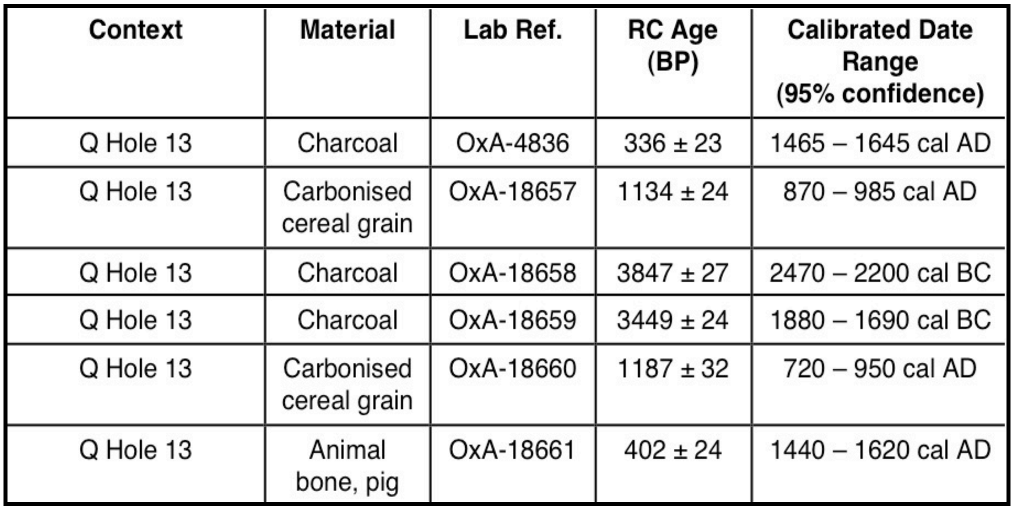


Phase 4i - Q & R Holes (2 pairs of 40) with Mounds
& Station Stones, 92 & 94 being Bluestones



**The Bluestone Circle, Stonehenge**

In contrast to the dating of the Q & R Holes in Cleal's 'conventional phases', 2550 – 2400 cal BC, and Parker Pearson's 'revised scheme', 2900 – 2600 cal BC, Darvill and Wainwright have supposedly pinpointed the date as being 2470 – 2200 cal BC based on a single sample of charcoal, (OxA-18658). However, the radiocarbon determinations for all the material they excavated from Q Hole 13 in 2008, were *"rejected for the purposes of modelling the chronology of the monument".* (Marshall, Darvill, Parker Pearson & Wainwright, 2012)

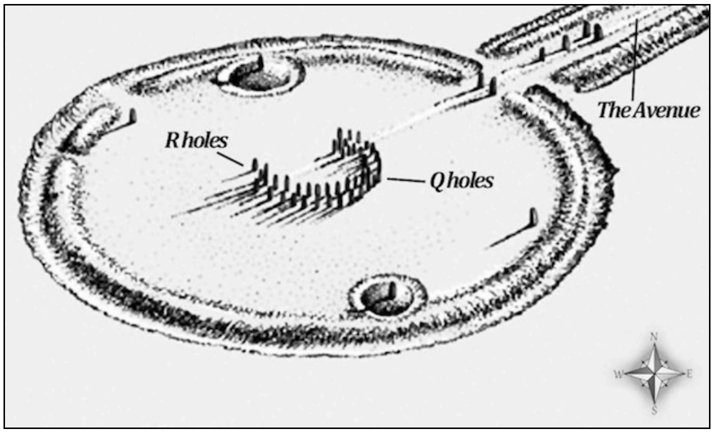


| Context | Material | Lab Ref. | RC Age (BP) | Calibrated Date Range (95% confidence) |
|---|---|---|---|---|
| Q Hole 13 | Charcoal | OxA-4836 | 336 ± 23 | 1465 – 1645 cal AD |
| Q Hole 13 | Carbonised cereal grain | OxA-18657 | 1134 ± 24 | 870 – 985 cal AD |
| Q Hole 13 | Charcoal | OxA-18658 | 3847 ± 27 | 2470 – 2200 cal BC |
| Q Hole 13 | Charcoal | OxA-18659 | 3449 ± 24 | 1880 – 1690 cal BC |
| Q Hole 13 | Carbonised cereal grain | OxA-18660 | 1187 ± 32 | 720 – 950 cal AD |
| Q Hole 13 | Animal bone, pig | OxA-18661 | 402 ± 24 | 1440 – 1620 cal AD |

**Darvill and Wainwright's dates for Q Hole 13, Stonehenge**

Up until Darvill & Wainwright's 2008 excavation, there had only been two other radiocarbon dates of material from the Q & R Holes, the first being of an antler from one of the R Holes, dated to 2270 – 1630 cal BC. (Atkinson et al., 1967) However, those results were *"rejected for technical reasons".* (Marshall, Darvill, Parker Pearson & Wainwright, 2012) The second date, which was accepted for modelling the chronology of the site, was for an animal bone (pig humerus) in one of the Q Holes in the fill near the top, dating to 2460 – 2050 cal BC. (Allen and Bayliss, 1995) *"However, as a single fragment of bone which has no functional relationship to the infilling event, we suggest this sample provides a terminus post quem for the Q Hole's infilling after the removal of its stone.* (Marshall, Darvill, Parker Pearson & Wainwright, 2012)

In the 'conventional phases' of construction, (Cleal et al., 1995) and the 'revised scheme' (Parker Pearson, 2012) the Q & R Holes are believed to have formed a set of concentric arcs. However, the open side of the suggested arcs is aligned on a northwest – southeast axis. The fact that the henge, the 'Avenue', the Sarsen Circle, the Trilithon and Bluestone Horseshoes are all aligned to the Summer Solstice Sunrise, on a northeast – southwest axis, indicates the orientation of the suggested arcs is extremely implausible. (see illustration, page 12)



**Cleal's & Parker Pearson's Q & R Holes, Stonehenge**

### Phase 4ii – 2930 to 1900 BC or later

- Cremated remains are placed in the partially filled Aubrey Holes, upper ditch and on and within the inner bank. The reason for suggesting the dates of 2930 – 1900 BC or later is threefold.

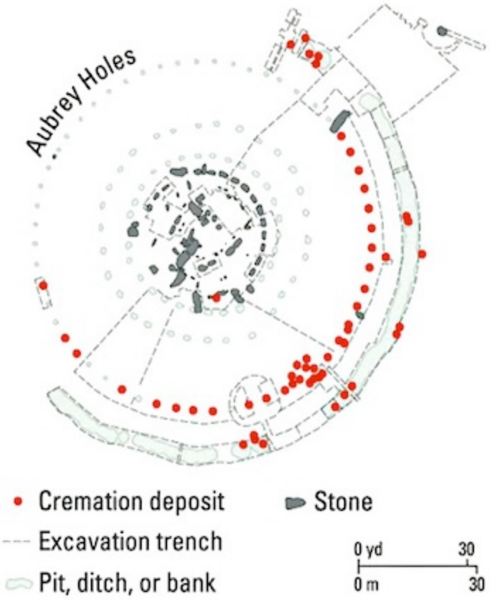
| Context | Material | Lab Ref. | RC Age (BP) | Calibrated Date Range (95% confidence) |
|---|---|---|---|---|
| Cremation adjacent to Aubrey Hole 7 | Cremated human bone, femur fragment | SUERC-30410 | 4420 ± 35 | 3330 – 2910 cal BC |
| Aubrey Hole 32 | Cremated human longbone fragment | OxA-18036 | 4332 ± 35 | 3080 – 2890 cal BC |
| Ditch fill | Cremated human bone, humerus | OxA-17957 | 4271 ± 29 | 2920 – 2870 cal BC |
| Ditch fill | Cremated human bone, radius | OxA-17958 | 3961 ± 29 | 2570 – 2360 cal BC |

**RC Dates (Marshall, Darvill, Parker Pearson & Wainwright, 2012)**

1) As discussed in Phase 2, the radiocarbon results for the remains next to Aubrey Hole 7; 3330 – 2910 cal BC, predate construction of the henge by 395 years or more, as compared to both Cleal's 'conventional phases' and Parker Pearson's 'revised stages', 3015 – 2935 cal BC. Since construction of the henge dictated removing the Bluestones from the 'Aubrey Holes' and re-erecting them in the Q & R Holes around 3015 – 2935, (see phase 4i) the possibility exists that there's an issue with the radiocarbon dating of the henge or the remains, though likely the latter.

2) That the precise area within Britain where the individuals who were cremated came from, is unknown. In other words, the individuals may have lived in a coastal region or near a river, as in the case of the inhabitants living within the vicinity of Tara and the Boyne, and therefore likely had a moderate diet of seafood or shellfish. (see Section 14, pages 31 – 33 of 'Orthostat: The Mound of the Hostages')

3) The issue of the 'reservoir effect', an anomaly for which there is no indication it was accounted for during the radiocarbon testing. *"for the accurate dating of human bone samples when the possibility exists of an aquatic component in the dietary protein… d15N analysis should be undertaken routinely."* (Cook, Bonsall, Hedges, McSweeney, Boroneant & Pettitt, 2001) *"calibrated dates are still affected by 'own age' and 'reservoir age'… and ideally should be corrected… In practice this is usually impossible." "These apparent ages are about 400 years for marine fish and shellfish, and may be up to several thousands of years in the case of freshwater fish and shellfish."* (Brindley, Lanting & van der Plicht, 2005) Using 400 years as the minimum correction, and subtracting that from the upper range of dates for the cremated remains of 3330 cal BC, and the lower range of 2300 cal BC, the suggested range is 2930 to 1900 BC or later.

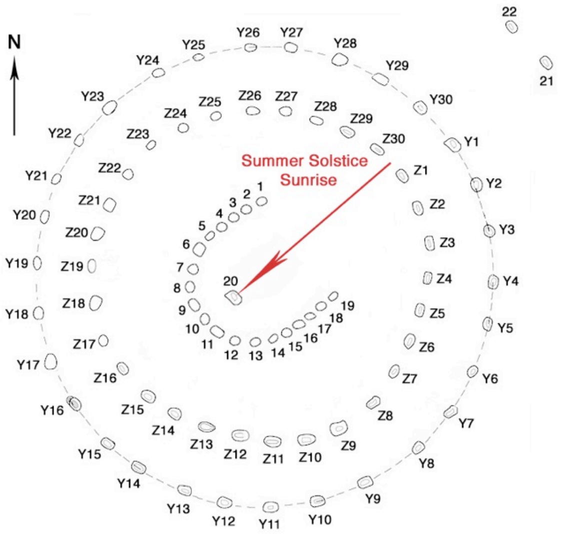


**Phase 4ii – Cremations**

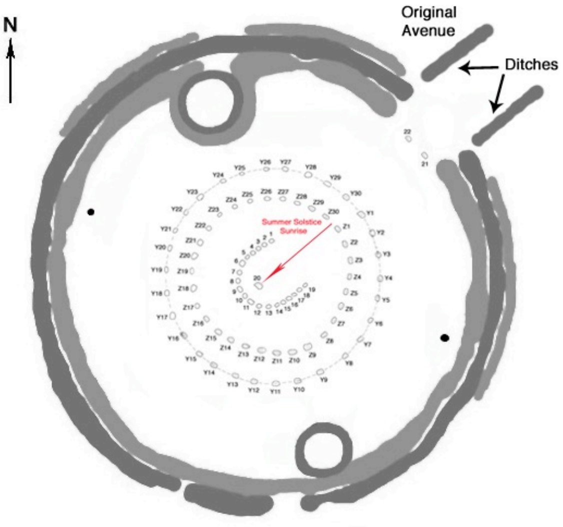
The foregoing aside, there is the possibility the remains were reburials from another site, which may be indicated by the fact that they were found in only 26 of the 34 Aubrey Holes that have been excavated, as well as within the bank and ditch. Furthermore, given the time period from when the remains were excavated in 1920, to the time they were reinterred in 1935 as Hawley found them of no scientific value, a strict ‘chain of evidence’ may not have been maintained. As such, there exists the possibility of contamination, i.e., the remains may have been mixed with those from another site.

**Phase 5i: 2815 to 2735 BC**

- The eighty (80) Bluestones from the Q & R Holes are removed, and re-erected in two concentric circles within the Y & Z Holes, consisting of thirty (30) stones each. Nineteen (19) of the remaining twenty (20) Bluestones are erected in a horseshoe at the center of the Y & Z Holes, just as the Trilithons are today. The one (1) remaining Bluestone is set within the horseshoe as an ‘altar stone’. The two (2) Bluestones from atop the mounds/platforms, are erected just inside the northeast entrance. This arrangement would have served as a template for the Sarsens and Trilithons erected several decades later. Here again, the circles were likely graduated; short (Z holes) to tall (Y holes) and possibly set edge to edge.

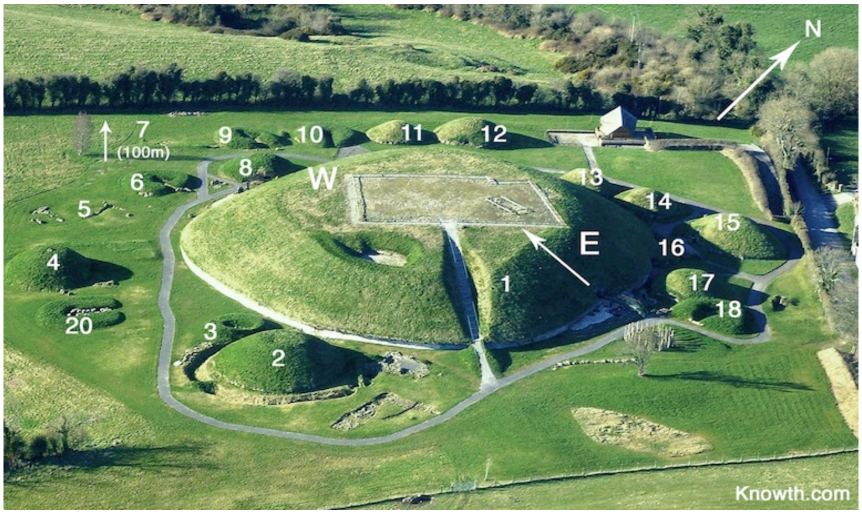


Phase 5i - Y & Z Holes with Horseshoe consisting of 82 Bluestones



Phase 5i - Y & Z Holes with Horseshoe consisting of 82 Bluestones

In both Cleal’s and Parker Pearson’s models, the stones of the Q & R Circles are listed as the first stone monument constructed, with the Sarsens and Trilithons a few decades later. This would have been akin to progressing from simple earthen/stone mounds, to building the great passage mounds at Knowth and Newgrange, with no interim phase(s), such as the satellite mounds at Knowth, a number of which predate Site 1. This would have allowed for the development of passageways, capstones & corbelled ceilings at Knowth and Newgrange, and the lintels at Stonehenge, with their tongue/groove & mortise/tenon joints.



**Aerial of Knowth**

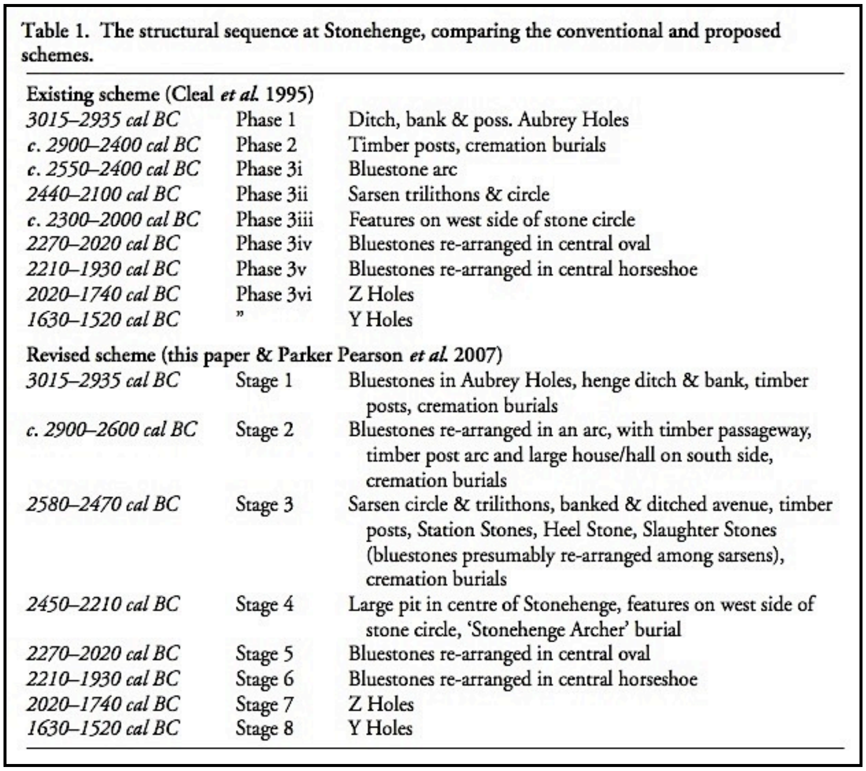


Table 1. The structural sequence at Stonehenge, comparing the conventional and proposed schemes.

| | | |
|---|---|---|
| **Existing scheme (Cleal *et al.* 1995)** | | |
| *3015–2935 cal BC* | Phase 1 | Ditch, bank & poss. Aubrey Holes |
| *c. 2900–2400 cal BC* | Phase 2 | Timber posts, cremation burials |
| *c. 2550–2400 cal BC* | Phase 3i | Bluestone arc |
| *2440–2100 cal BC* | Phase 3ii | Sarsen trilithons & circle |
| *c. 2300–2000 cal BC* | Phase 3iii | Features on west side of stone circle |
| *2270–2020 cal BC* | Phase 3iv | Bluestones re-arranged in central oval |
| *2210–1930 cal BC* | Phase 3v | Bluestones re-arranged in central horseshoe |
| *2020–1740 cal BC* | Phase 3vi | Z Holes |
| *1630–1520 cal BC* | " | Y Holes |
| **Revised scheme (this paper & Parker Pearson *et al.* 2007)** | | |
| *3015–2935 cal BC* | Stage 1 | Bluestones in Aubrey Holes, henge ditch & bank, timber posts, cremation burials |
| *c. 2900–2600 cal BC* | Stage 2 | Bluestones re-arranged in an arc, with timber passageway, timber post arc and large house/hall on south side, cremation burials |
| *2580–2470 cal BC* | Stage 3 | Sarsen circle & trilithons, banked & ditched avenue, timber posts, Station Stones, Heel Stone, Slaughter Stones (bluestones presumably re-arranged among sarsens), cremation burials |
| *2450–2210 cal BC* | Stage 4 | Large pit in centre of Stonehenge, features on west side of stone circle, 'Stonehenge Archer' burial |
| *2270–2020 cal BC* | Stage 5 | Bluestones re-arranged in central oval |
| *2210–1930 cal BC* | Stage 6 | Bluestones re-arranged in central horseshoe |
| *2020–1740 cal BC* | Stage 7 | Z Holes |
| *1630–1520 cal BC* | Stage 8 | Y Holes |

**Cleal's model vs. Parker Pearson's, Stonehenge**

According to the models, the Y Holes were dug between 1630 – 1520 cal BC, with the Z Holes dating to 2020 – 1740 cal BC. (Cleal et al., 1995) (Parker Pearson et al., 2007 & 2009) However, according to the radiocarbon results, material from the Y Holes dates to 1880 – 1520 cal BC. (Ramsey & Bayliss, 1996)

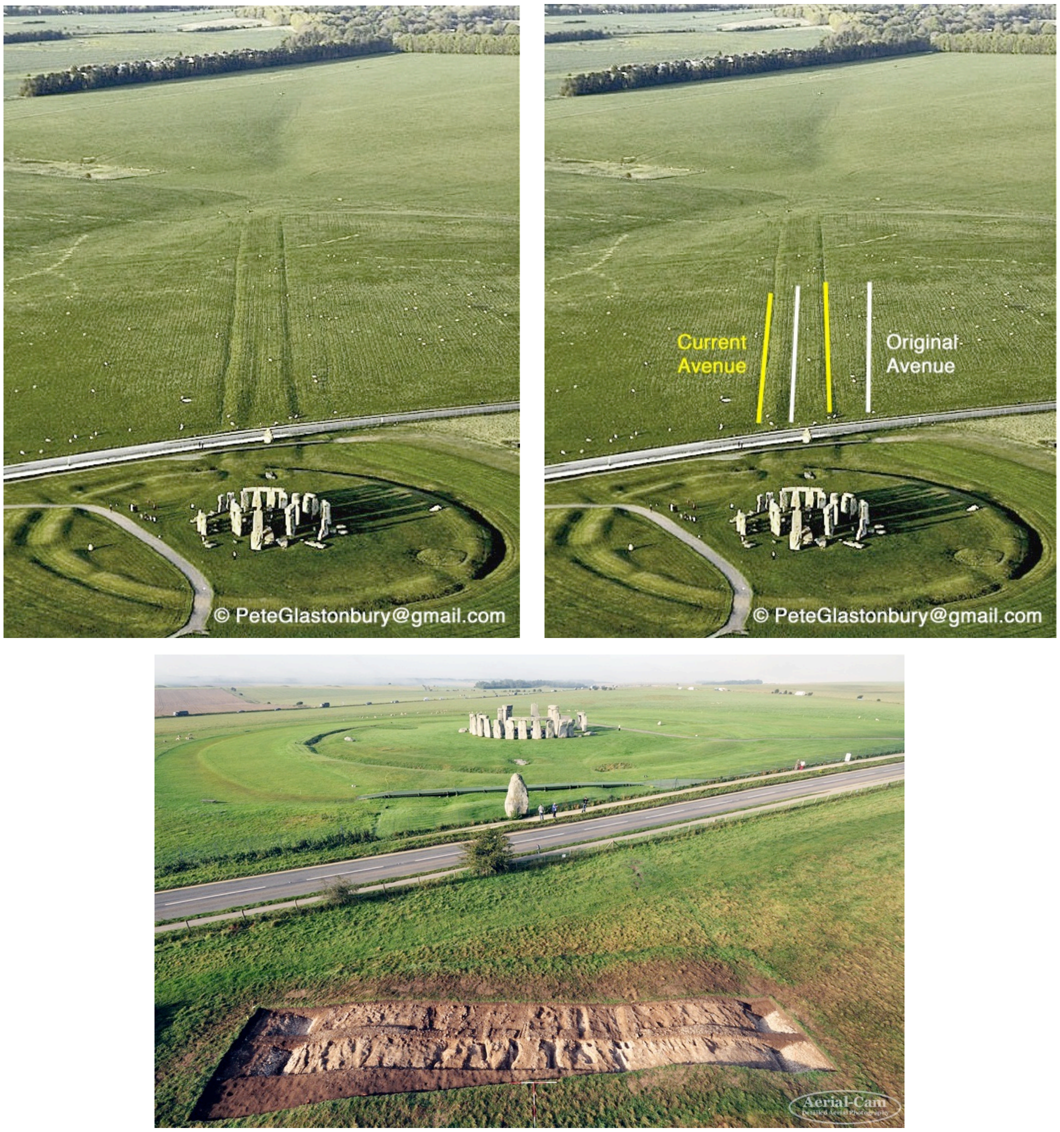
It's believed the Y & Z Holes never held stones, however, *"At the bottom and sides of them* [the Y & Z Holes] *the diggers have unearthed a thin layer of chalk rubble... In this earliest layer there usually was also found a single bluestone fragment of the variety called rhyolite"* although, *"There were no pressure marks on the bottom of any of these holes."* (Hawkins, 1965) Though there were "pressure marks" within some of the Q & R Holes, none were found within the 'Aubrey Holes', yet it's believed they once held Bluestones, and as in the case of Aubrey Hole 7 when it was re-excavated in 2008, it was discovered that, "*In the bottom sat the undisturbed residue of a layer of chalk packing and a patch of crushed chalk caused by the weight of a standing stone."* (British Archaeology, 2010)

- In the 'revised scheme', coeval with the Sarsens and Trilithons being erected, the 'Avenue' was added. (Parker Pearson, 2007 & 2009) However, there's a distinct possibility a precursor to the 'Avenue' was constructed at this point, this based on two grooves in the landscape that run parallel to the 'Avenue'. It's been suggested these are 'peri-glacial stripes', which by coincidence are aligned on the Summer Solstice Sunrise – Winter Solstice Sunset axis, and were therefore the motivating factor for choosing the location. (Parker Pearson et al., 2008) *"Think about this coincidence in the landscape, the fact that you've got these natural stripes in the landscape actually aligning with the direction where the midwinter sun goes down. And that, for me, provides a very plausible reason why Stonehenge was constructed where it was."* (Ruggles, 2010) While on the surface the foregoing might seem "plausible", there are a number of issues.

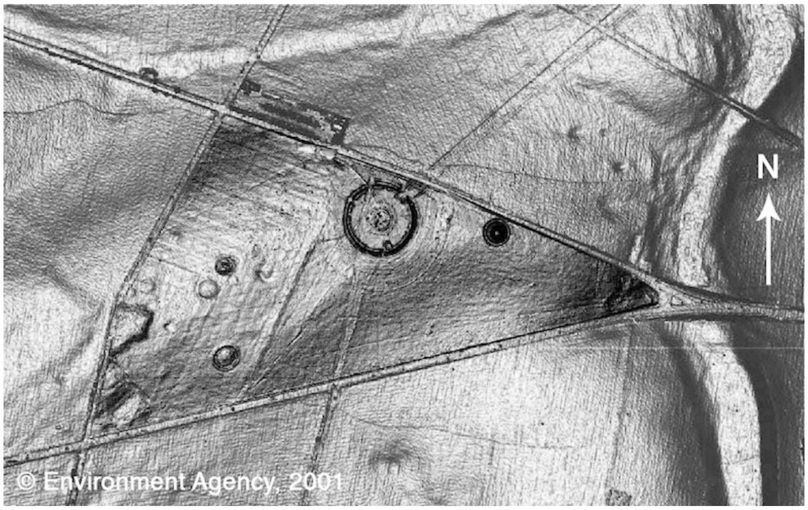
1) The peri-glacial stripes run diagonally across the slope of the hill at an acute angle, rather than directly downhill to the north, and only for a distance of 183m (200 yards). (see photos, page 17 & 18)
2) Assuming for the purposes of argument that the 'stripes' were due to glaciation, it would have meant that two stones, of the same size, with identical surfaces on their undersides, would had to have been dragged by the retreating glacier, over roughly the same distance of 183m (200 yards), leaving grooves that match in both width and depth.
3) As the 'stripes' were only detectable by using Magnetic Gradiometry, an excavation trench and only faintly seen in aerial photos, it's questionable that they were visible on the ground in 3000 BC.

4) It would have meant that the builders knew the precise axis of the Summer Solstice Sunrise – Winter Solstice Sunset, prior to constructing the henge. If in fact that were the case, and if it was a *“very plausible reason why Stonehenge was constructed where it was”* then why would the builders not have constructed the ‘Avenue’ precisely along that axis? The fact that they didn’t, indicates the grooves are not peri-glacial stripes, but rather an earlier version of the ‘Avenue’.

With regards to the alignment of the ‘Original Avenue’, as opposed to that of the ‘Current Avenue’, it was likely aligned along the axis when the sun fully cleared the horizon on the Summer Solstice, whereas the ‘Current Avenue’ probably aligned on the axis when only a portion of the sun appeared above the horizon.



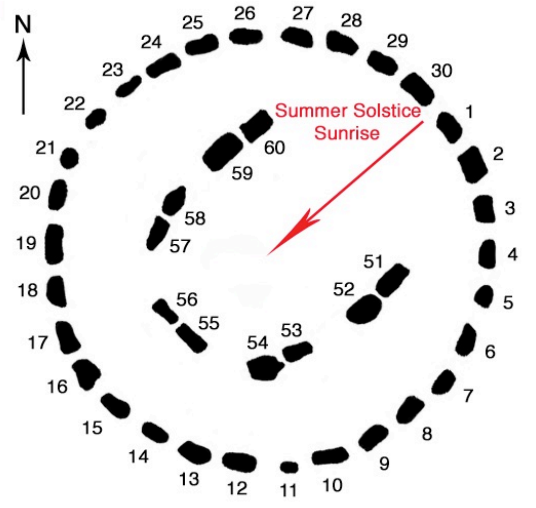
**Aerials showing the purported ‘peri-glacial stripes’**



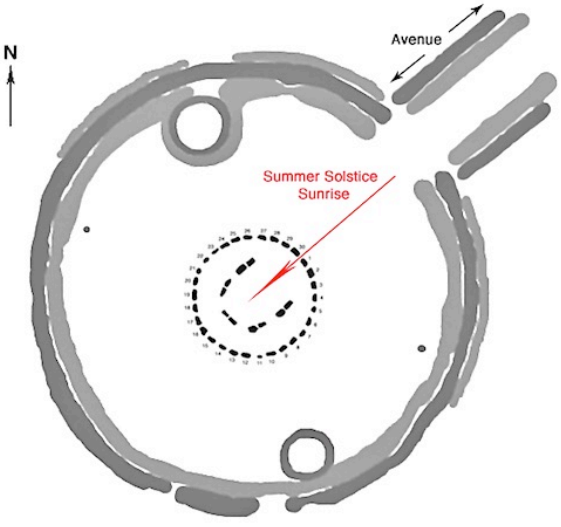
**Lidar of Stonehenge**

### Phase 5ii: 2580 – 2470 cal BC (Parker Pearson et al., 2007)

- The Y & Z Bluestones are removed, and the Sarsens and Trilithons erected.
- The alignment of the 'Avenue' is altered and extended to the base of the hill.



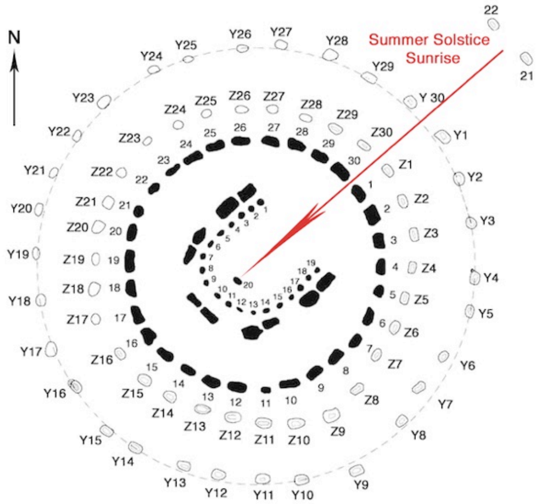
Phase 5ii - Sarsens & Trilithons are erected



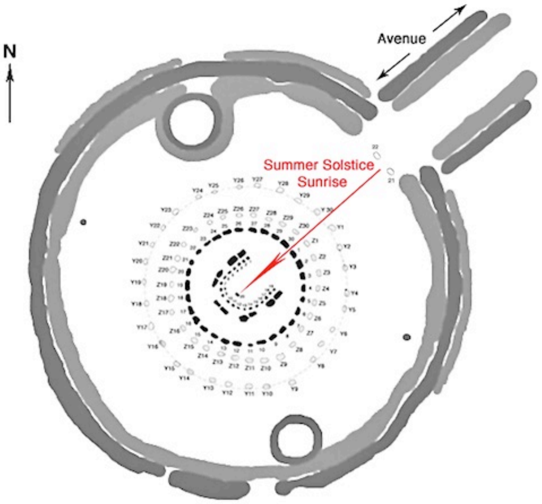
Phase 5ii - Sarsens & Trilithons are erected

### Phase 5iii: 2580 – 2470 BC (likely coeval with Phase 5ii)

- The Y & Z holes are re-dug and the thirty (30) pairs of Bluestones reset. This accounts for the fact that Z Hole 7 cut into the backfill of the construction ramp for Stone 7 of the Sarsen Circle, as well as the irregularities in the rings.
- The nineteen (19) Bluestones that formed the horseshoe, are re-erected within the Trilithon Horseshoe, as is the Bluestone used as the 'altar stone' in Phase 5i.

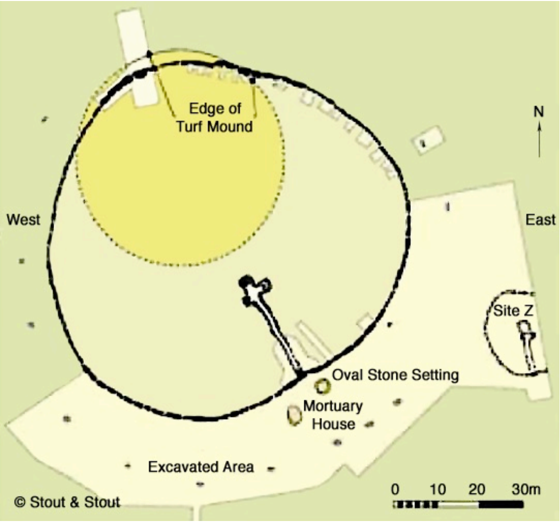


Phase 5iii - Y & Z Holes post Sarsens & Trilithons
with Bluestone Horseshoe



Phase 5iii - Y & Z Holes post Sarsens & Trilithons
with Bluestone Horseshoe

The reason for suggesting the foregoing, is that throughout Ireland and the UK, earlier monuments were, as a rule, incorporated into later monuments. Case in point, is the turf mound discovered during excavation within the northwest section of the main mound at Newgrange.

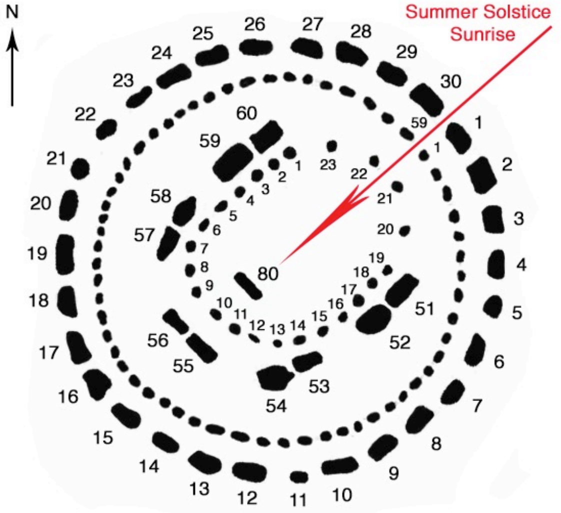


**Plan of Newgrange**

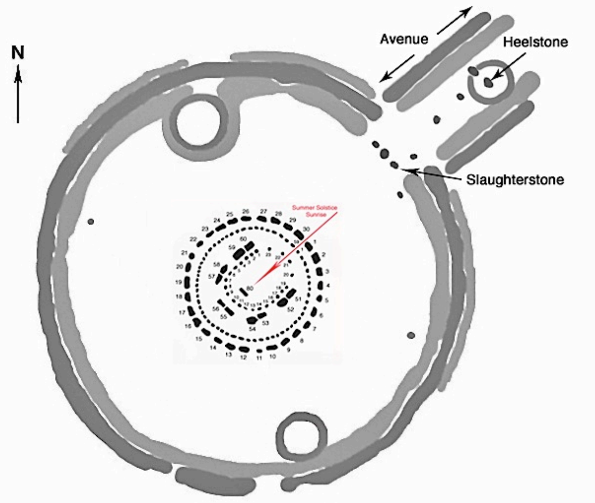
### Phase 5iv: 2270 – 2020 BC

- Fifty-nine (59) of the Bluestones from the Y & Z Holes are rearranged in a circle between the Sarsens & Trilithons to form the Bluestone Circle.
- The remaining one (1) Y & Z Bluestone, along with the two (2) Bluestones from the northeast entrance and the one (1) Bluestone used as the 'altar stone', are erected at the opening of the Bluestone Horseshoe, to form the Bluestone Oval.

- A block of sandstone (Stone 80, 5m in length) replaces the Bluestone used as the 'altar stone'. The Heelstone, Slaughter Stone and several others are added to the 'Avenue'.



Phase 5 iv - Bluestone Circle erected &
Bluestones 20 - 23 added to form oval



Phase 5 iv - Bluestone Circle erected &
Bluestones 20 - 23 added to form oval

Here again, the reason for suggesting the foregoing is that earlier monuments were, as a rule, incorporated into later monuments.

- The 'Avenue' is extended from Stonehenge Bottom, to Bluestonehenge along the River Avon. It should be noted there is no conclusive dating for this phase of the 'Avenue'.

Parker Pearson places construction of the Bluestone Circle coeval with the Sarsens & Trilithons, 2580 – 2470 cal BC. (Parker Pearson, 2007 & 2009) While this time frame seems plausible from a construction perspective, it would mean the antlers found within the Y & Z Holes, would have been deposited anywhere from 440 to 1,060 years later, which is unlikely. On the other hand, Cleal dates the Bluestone Circle to 2270 – 2020 cal BC, with the lower end of that range closer to the upper range for the antlers found in the Y & Z Holes. (see Phase 5v, page 21)

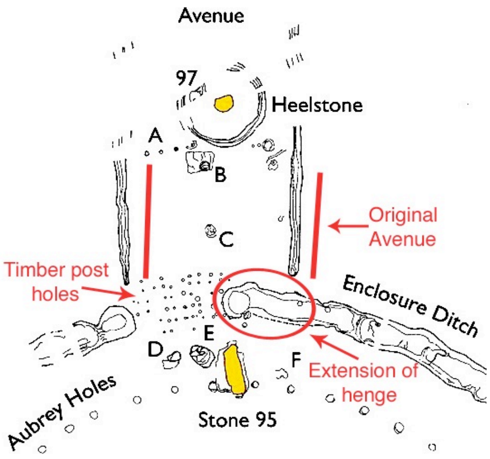
| Context | Material | Lab Ref. | RC Age (BP) | Calibrated Date Range (95% confidence) |
|---|---|---|---|---|
| Z Hole 29 | Antler | OxA-4836 | 3540 ± 45 | 2030 – 1740 cal BC |
| Y Hole 30 | Antler | UB-3822 | 3341 ± 22 | 1735 – 1530 cal BC |
| Y Hole 30 | Antler | UB-3823 | 3300 ± 19 | 1675 – 1520 cal BC |
| Y Hole 30 | Antler | UB-3824 | 3449 ± 24 | 1880 – 1690 cal BC |

**From 'Dating Stonehenge' (Ramsey & Bayliss, 1996)**

As *“The holes were left open and filled in gradually with fine silt blown in from the surrounding fields”,* (Parker Pearson, 2011) the antler picks were simply discarded over time. In other words, the dates do not establish a time period for the digging of the Y & Z Holes, but merely a terminus post quem.

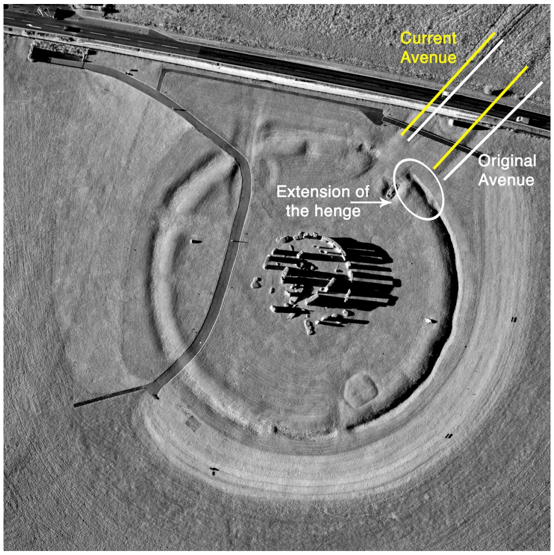
**Phase 5v: 1830 – 1620 BC**

- The eastern section of the henge is extended. As Y Hole 30 & Z Hole 29 are closest to the northeast entrance, the discarded antler picks seem to indicate that some part of the entrance was being ‘remodeled’. The suggested time frame of 1830 – 1620 BC is based on the average of both the upper and lower range of dates for the antler picks found within the Y & Z Holes. (see table, bottom of page 20)



© Cleal et al., 1995

**Northeast entrance of Stonehenge**



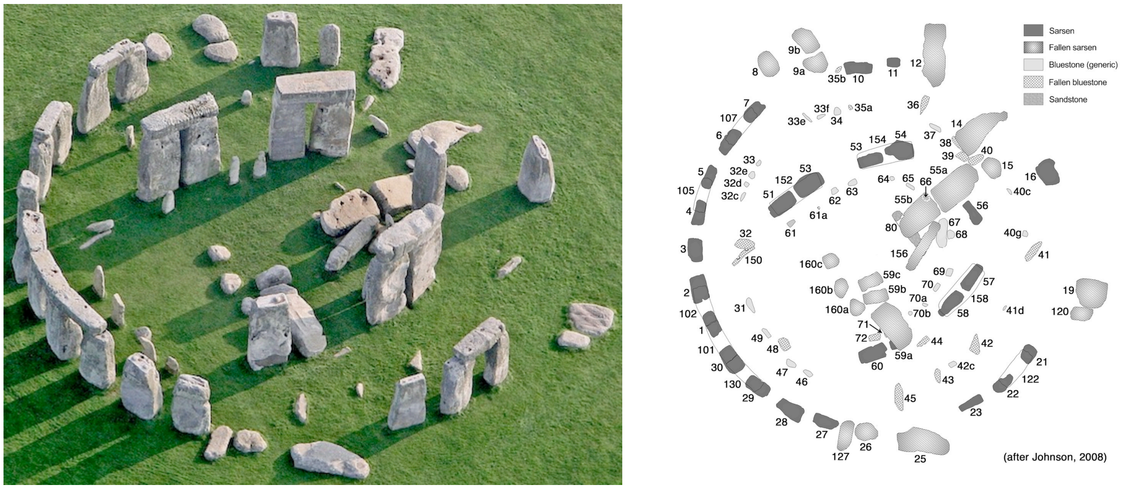
**Aerial showing extension of the henge**

The reason for suggesting the extension, is that the eastern section of neither the ‘Original Avenue’ nor ‘Current Avenue’ are aligned with the eastern side of the entrance, which gets to the issue of what constituted sunrise/moonrise and sunset/moonset during the Neolithic. Our current day definition of sunrise/moonrise is the instant at which the upper limb of the sun/moon appears on the horizon, and sunset/moonset at the moment when the upper limb disappears below the horizon. Did the Neolithic people believe that as well, or did they calculate say the Summer/Winter Solstice Sunrises from the point at which the lower limb of the sun cleared the horizon?

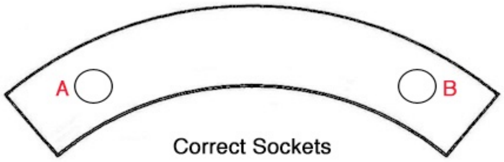
- The 'Original Avenue' marked the sun after the lower limb had cleared the horizon.
- The ‘Current Avenue' likely marked the sun when some portion of it had cleared the horizon. So the alignment of the ‘Original Avenue’ wasn't an error by the 'astronomers', but rather a reassessment by a subsequent generation of 'astronomers' as to what constituted the start of the Summer Solstice Sunrise.
- The extension of the henge on the east side of the entrance, indicates the alignment was at that point to the upper limb of the sun as it appeared on the horizon, at which point the 'Avenue', to a certain extent, became obsolete.

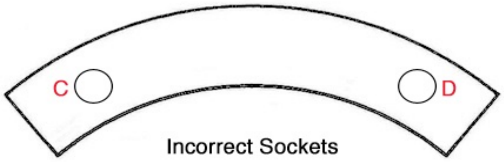
While it’s believed, based on our current definitions of astronomical events, that the Aubrey Holes are not correctly aligned to any astronomical events, they may well have been during the Neolithic, based on the builder’s ‘definitions’. Then too, one has to factor in the slight difference in the Earth’s axial tilt which is currently (23.439°) versus 5,000 years ago (24.022°).

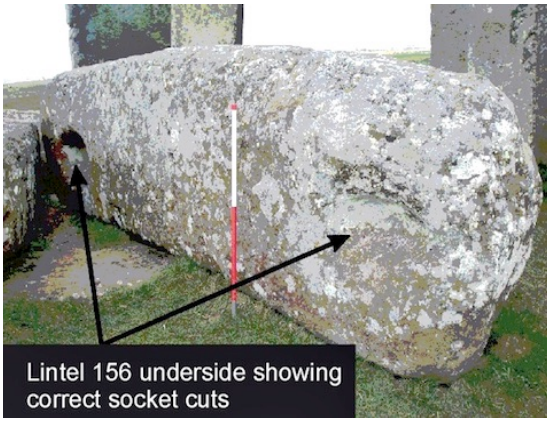
On a different topic, one of the lintels, Stone 156, which has mortises carved on both the top and bottom, supposedly indicates the second set was mistakenly carved on the “incorrect side”. (Parker Pearson, 2008) There is no “incorrect side” since the lintel, when inverted on its horizontal axis, is exactly the same. The logical explanation is that the spacing between the mortises on the ‘correct side’ (A & B), differ to a significant extent from those on the ‘incorrect side’ (C & D), which likely indicates the builders had intended to use it atop a different set of Trilithons or Sarsens. (see images, page 23) Alternatively, it may indicate the Trilithons which Stone 156 was originally to sit atop, had been erected, the mortises carved on the ‘incorrect side’, along with the tenons on the Trilithons, but the lintel was not immediately raised. The following season when the builders returned, the Trilithons, due to their immense weight, had settled or shifted over the course of the year, thereby making the lintel unusable as initially carved. The foregoing likely applies to another lintel, Stone 122.



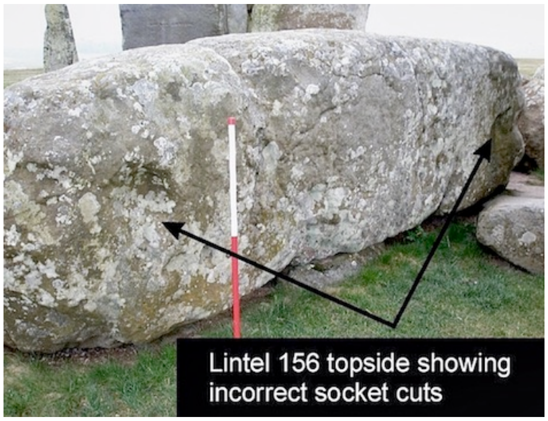
**Aerial and plan of Sarsens & Trilithons, Stonehenge**



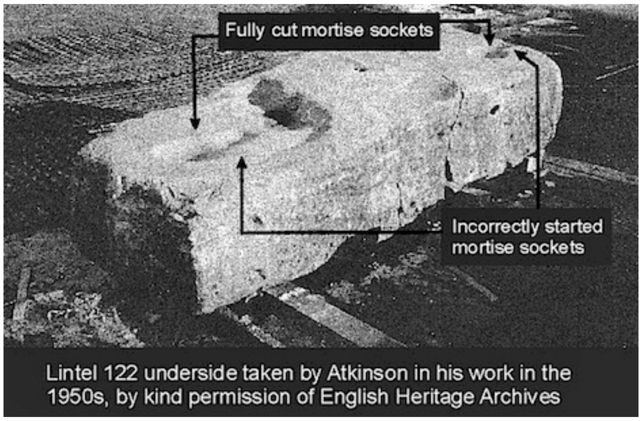




Lintel 156 underside showing correct socket cuts



Lintel 156 topside showing incorrect socket cuts


Fully cut mortise sockets
Incorrectly started mortise sockets

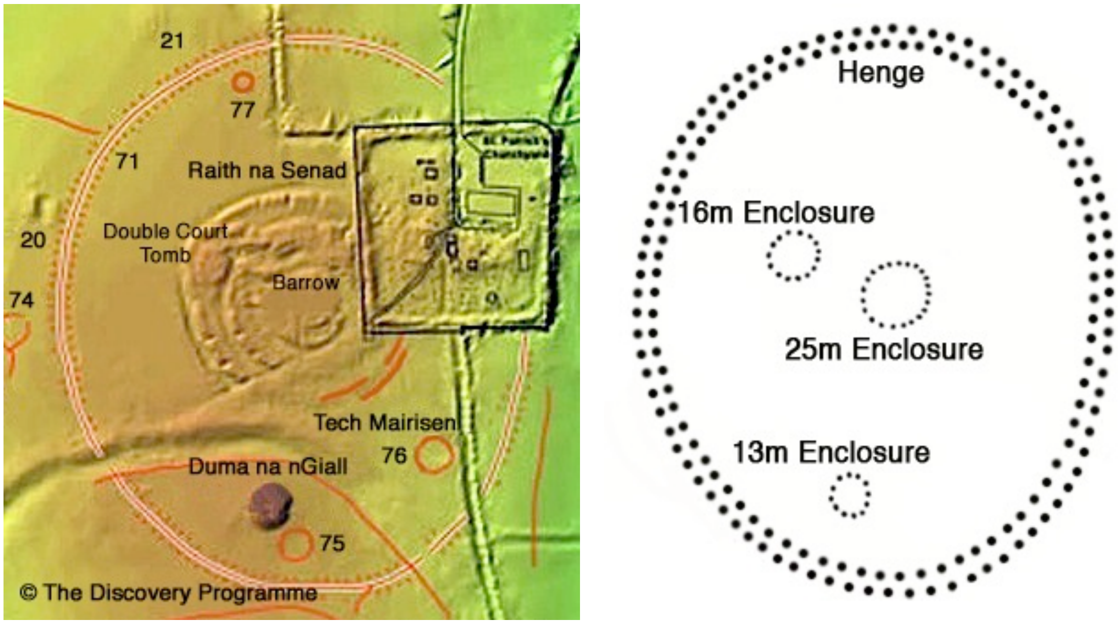
Lintel 122 underside taken by Atkinson in his work in the 1950s, by kind permission of English Heritage Archives

## Section 2: Stonehenge – Cemetery, Observatory or Neolithic Lourdes

There are three main schools of thought regarding the reason Stonehenge was constructed. First, that the site was, from its inception, a cemetery. (Parker Pearson, 2012) Perhaps the most widely promoted, is that Stonehenge served as an observatory. (Hawkins, 1965) (Johnson, 2008) Most recently, there's been the suggestion that it was a site of healing, the 'Lourdes' of its day. (Darvill and Wainwright, 2008 & 2009)

Based on an observation by one of his colleagues, Parker Pearson believes Stonehenge was constructed as a tribute to the ancestors. "*In Madagascar, stone belongs to the world of the ancestors and is used to construct tombs and monuments. So stone in Madagascar is really for sacred purposes, for the dead. Wood is for the living."* (Ramilisonina, 2010) *"And that's the moment the light bulb, went on in my mind, and I thought, "Stone was associated with the ancestors, the dead, and constructions in timber should be associated with the living." And this made me think a little more about what was happening in the Stonehenge landscape."* (Parker Pearson, 2010) There two problems with this conclusion, the most obvious being that Ramilisonina's comment is based on his study of the prehistory of Madagascar, 9150km from Stonehenge. Secondly, is the time period covered in his research, the 15th to 19th centuries AD. Merely because this belief system has existed in other cultures, places and times, one cannot make the leap that Stonehenge is a monument to the ancestors, and a site like Woodhenge, located approximately 3.2km (2 miles) northeast of Stonehenge, a 'domain for the living'.

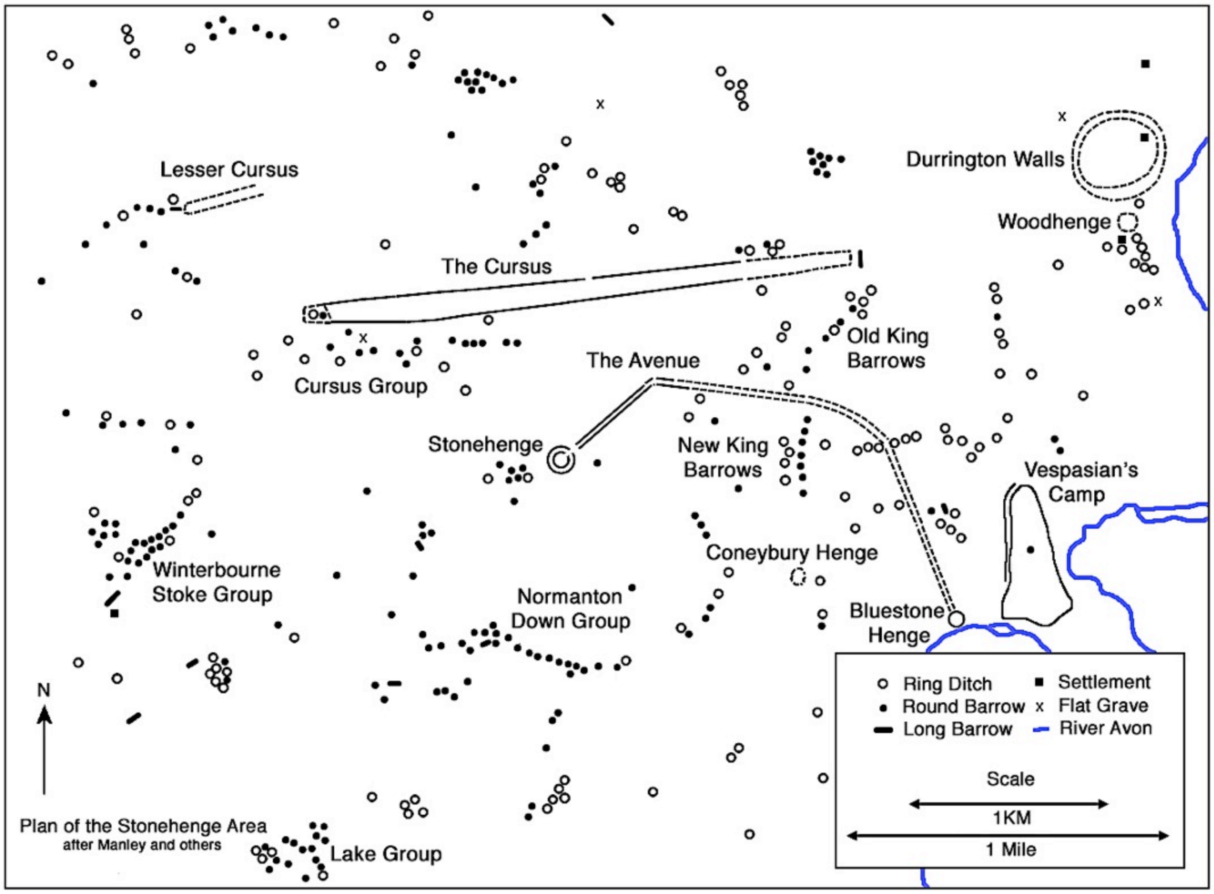
If any parallel is to be drawn, it should be to similar monuments constructed during the same time frame, within the same geographic region, by those with culturally similar backgrounds. Case in point, are the remains of a massive timber henge on the Hill of Tara, County Meath, Ireland, a mere 420km from Stonehenge, which has been radiocarbon dated to between 3030 – 2190 BC, with a date more likely being 2500 to 2300 BC. (Newman, 2002) Inside the henge, were three (3) small timber enclosures, within which were discovered the remains of numerous individuals. Upon the timbers rotting away or being removed, three earthen monuments were constructed which incorporated those burial sites, i.e., Ráith na Senad, which originally consisted of a barrow and double-court tomb, and a small passage mound Duma na nGiall, the Mound of the Hostages. (Moriarty, 2007) In the case of the 16m enclosure for example, *"the area was used as a burial ground. Nine burials (six inhumations, both crouched and extended and three cremations) were uncovered".* (Newman, 1997) The reason for abandoning timber in favor of earth and stone, is that the latter is relatively permanent, and requires very little man-power and resources to maintain.



**Lidar & drawing of the henge & enclosures, the Hill of Tara**

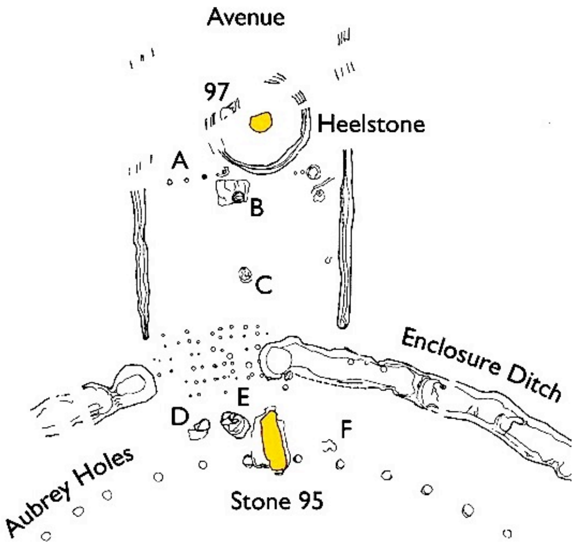
Interestingly, the remains found within the henge at Tara, parallel what was unearthed within Woodhenge, *"Near the centre was an interment of an infant with a cleft skull; in one hole (C14) a cremation, and a crouched inhumation were found in a grave in the bottom of the ditch."* (English Heritage, a)

It's believed the chalk beneath the cremated remains within the Aubrey Holes, having been crushed by a heavy weight, indicates the Bluestones that once filled the holes, served as "grave markers". (Parker Pearson, Richards & Pitts, 2008) If this were the case, it would have meant that not only would the chalk have been crushed, but the remains as well. Though it could be argued that the more than 50,000 bone fragments recovered from the thirty-two 'Aubrey Holes' excavated by Hawley in 1920 and reinterred in 1935 within AH 7, were a result of being crushed by the Bluestones, there is nothing to suggest those fragments weren't in that condition at the time they were originally buried. That issue aside, if in fact the Bluestones served as "grave markers", there is one critical piece of evidence that must be accounted for, the partially infilled holes, which would have involved an extremely implausible scenario; that all fifty-six (56) Aubrey Holes were dug, the Bluestones erected crushing the chalk, the stones removed allowing the holes to naturally infill, the remains interred and the Bluestones re-erected. While there's no disputing the fact that remains were deposited in the Aubrey Holes, the use of "grave stones" was not a practice during the Neolithic. What was the practice, were burials within various types of barrows etc., of which there are dozens surrounding Stonehenge. This is another reason for having suggested in Phase 4ii that the remains were possibly reburials.



**Map of the Stonehenge Complex**

In light of the evidence, the Bluestones never served as "grave markers". The simplest and most logical scenario, is that the Bluestones were erected in the 'Aubrey Holes' causing the chalk to be crushed. Upon their removal, the holes began to infill naturally, with the remains placed atop the fill decades or centuries later. In short, Stonehenge was never constructed as a cemetery, nor the northeastern entrance a "mortuary house". *"One area of the site that remains stubbornly difficult to integrate, is that between the main entrance and out beyond the Heelstone. Many of those features, including stone pits D and E, Stone 95, the rash of postholes across the ditch causeway, the stone or post pits B and C and the row of postholes at A – even the Heelstone and Stone 97 – could be parts of what elsewhere might be interpreted as a large "mortuary house" defined by parallel ditches. The ditches subsequently became the start of the Avenue."* (Pitts, 2012) If in fact the northeast entrance served as a "mortuary house”, then it would be expected that at least some human remains would have been unearthed, yet to date none have been recorded.



© Cleal et al., 1995

**Northeast entrance of Stonehenge**

Over the tens of generations that inhabited the area over the course of the nearly two millennia Stonehenge was evolving, the purpose of the monument may have changed dramatically, as in the case of the Mound of the Hostages. Following is an excerpt from 'Orthostat: The Mound of the Hostages', Section 13, pages 27 – 31.

*“The construction and original use of the tomb has now been radiocarbon dated to 3350 – 3100 BC.” (Twohig, 2006) However, “The earliest identifiable monument is a postulated [13m timber] enclosure of Neolithic date, part of which was uncovered in pre-tomb levels during excavation of Duma na nGiall and radiocarbon dated to between 3030 – 2190 B.C.” “The construction of… Duma na nGiall… occurred sometime after the [13m] enclosure had fallen into disuse or was burned down.” (The Discovery Programme, 1997) The obvious issue here, is that it’s impossible for an older monument to have been constructed atop a more recent one.”*

*“Given that the monument’s passageway is aligned with the cross-quarter sunrises, indicates that it was built for religious and/or astronomical purposes, not as a ‘tomb’, which supports the suggestion that the term ‘passage tomb’ is a misnomer. As such, its construction predated, at least by a few decades, the enormous number of Early Bronze Age burials interred within the passageway which, as in the case of the henge, would have defeated the purpose of the*

*passageway's alignment. Therefore, not even the Early Bronze Age burials, (2281 – 1943 BC) and the twenty (20) or more individuals buried within the mantle, (fourteen dates, 2131 – 1533 BC) can be assigned to its construction."*

**Excavation of the Mound of the Hostages, the Hill of Tara**

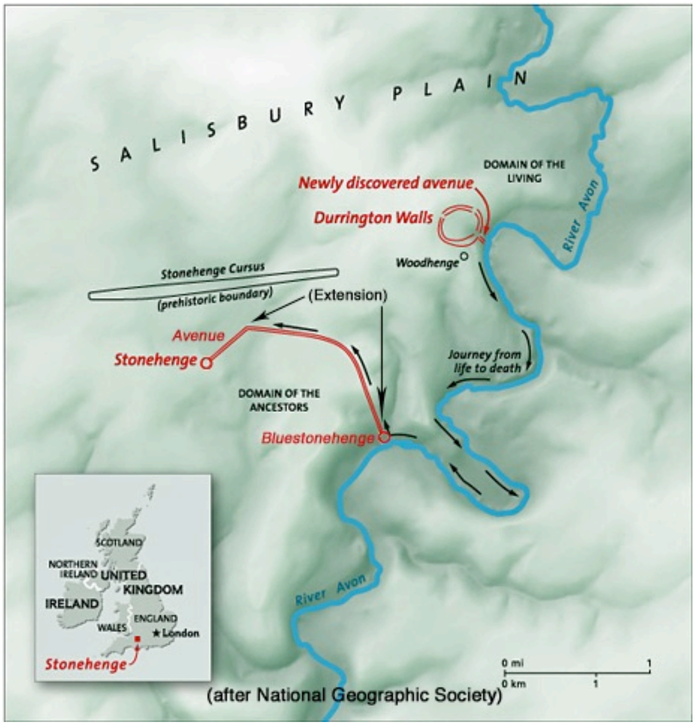
The point here, is that the cremated remains at Stonehenge, like those within the chamber and passageway of the Mound of the Hostages, were either interred by a subsequent generation, perhaps due to a dramatic shift in religious practices, or by another culture entirely.

It has been suggested that the remains buried within the 'Aubrey Holes' were those of "elites", i.e., ancient kings or chieftains and their family members. (Parker Pearson, 2013) Like the remains within the Mound of the Hostages, the remains he suggests are of "elites", were hardly buried in a manner befitting their status, nor were they buried with artifacts that would clearly indicate they were 'elites', as in the case of the wealth of artifacts interred with the 'Amesbury Archer'. (see illustration, page 32) The condition of the remains excavated from the 'Aubrey Holes', should have indicated that these were not burials of "elites". Beyond that, there's the issue of association. Given that the 'Aubrey Holes' were partially infilled at the time of the burials, the remains cannot be associated with either the time period the holes were dug, or that they were dug for the express purpose of burials, the latter of which is further supported by the fact that the remains were only found within 26 of the 34 Aubrey Holes that have been excavated. Another indicator that the burials were not of "elites", gets back to the issue of the Bluestones supposedly being "grave markers'. If in fact the Bluestones were "grave markers" of "elites", then why were the stones removed, and why were there burials within the bank and ditch, rather than the 'Aubrey Holes'? As mentioned previously, older monuments were, as a rule, incorporated into newer monuments. As the supposed “grave markers” were removed, this would indicate that the stones were scavenged for use elsewhere within the enclosure. This in turn might indicate that the timber posts, Aubrey Holes and henge were constructed by an entirely different culture, than that which constructed the Q & R Circles, the Y & Z Circles, the Avenue, the Sarsen Circle and Trilithon Horseshoe.

If in fact “elites” were buried at Stonehenge, which Parker Pearson believes the ‘Amesbury Archer’ to have been, and whom he suggests to have been responsible for having brought Britons together to build Stonehenge in order to unite the country, it begs the question, why was the ’Archer’ buried at Amesbury, some 3 miles away, and not at Stonehenge? Moreover, as the ‘Archer’s’ remains have been dated to 2450 – 2200 cal BC, it means he wasn’t even alive when the Sarsens and Trilithons were erected in 2580 – 2470 cal BC, the dates cited in Parker Pearson’s “revised scheme”.

Parker Pearson has further suggested that the ‘Avenue’ was part of a processional route for the dead, from Durrington Walls, along the River Avon, to Bluestonehenge and then on to Stonehenge. However, *“Another curiosity of the Avenue’s route up the bluff, however, is the lack of hollowing which we would expect at this point if it had been subjected to heavy traffic for any length of time (this lack of hollowing is clear both from surface observation for the current project and from the excavations); it is precisely on shoulders such as this that hollow ways first develop. This argues somewhat against the ‘elbow’ either as a route for the stones or as a well used processional route over any length of time. If processions did take place up this slope they either did not happen very often or did not involve many people, as Stukeley surmised.”* (Field, Bowden & Soutar, 2012)

As for an ‘avenue’ from Durrington Walls, along the River Avon, to the recently discovered ‘Bluestonehenge’ there is no evidence to date. Parker Pearson supports his suggestion based on a newly discovered ‘avenue’ from Durrington Walls to the River Avon. However, *“The Stonehenge Riverside Project carried out excavations near the Southern Circle and found the remains of 9 small houses surrounded by layers of animal bone and pottery. These are thought to be part of a much larger settlement surrounding the Southern Circle, perhaps as many as 1000 houses originally.”* (English Heritage, b) That said, uncovering an ‘avenue’ from such a large settlement to the river, should come as no surprise, as the ‘avenue’ was no doubt used primarily for transporting water from the river to the settlement. In view of that alone, it’s impossible to make any connection between that ‘avenue’, and the main ‘Avenue’. Any alignment of this recently discovered ‘avenue’, to the Southern Circle within Durrington Walls, is likely due to chance, rather than by design.



(after National Geographic Society)

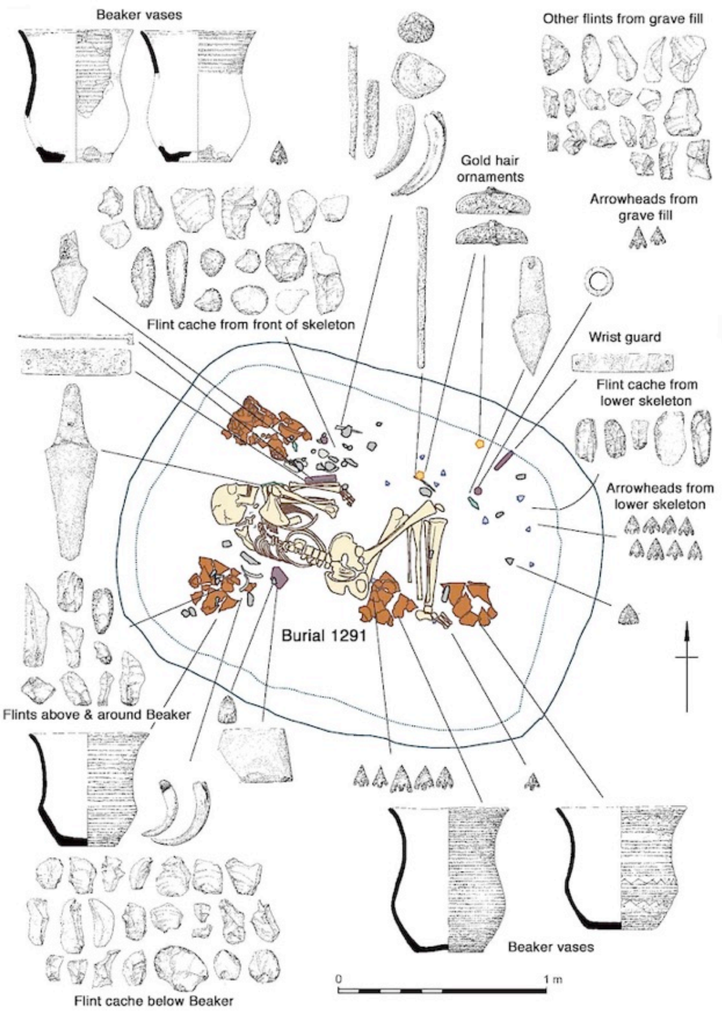
**Map of Parker Pearson’s ‘processional route’**

Lastly with regards to the ‘Avenue’, there is another parallel to Knowth. As discussed in 'Petroglyphs: The Bend of the Boyne' (Sections 2 & 4) the white quartz field in front of the entrances to Knowth, also likely served the purpose of illuminating the passageways beyond just the direct sunlight. While there is no passageway to be illuminated at Stonehenge, sunlight reflecting off the white chalk of the ‘Avenue’ would certainly have enhanced the experience of the Summer Solstice Sunrise.

The most popular idea as to the reason Stonehenge was constructed, is that it served as an observatory. *“Well, let's get one thing clear, this wasn't some sort of astronomical instrument. Everyone thinks that it's some sort of ancient observatory that incorporated lots of alignments. In fact, we archeologists are only confident in one alignment at this monument, and that was the main axis that you see here.”* (Ruggles, 2010) An observatory is defined as *“a room or building housing an astronomical telescope or other scientific equipment for the study of natural phenomena.”* While perhaps the only “natural phenomena”, i.e., alignment, which is still observable from Stonehenge in its current form is the Summer Solstice Sunrise, it nevertheless began life as an observatory for a number of "natural phenomena", just as at Knowth and Newgrange were, prior to construction of the great mounds. In this case, the 'Aubrey Circle', Q & R Circles and the Y & Z Circles being the "scientific equipment" of the time. So merely because Ruggles and his colleagues are "*only confident in one alignment at this monument",* does not mean Stonehenge was not, and is not still, an observatory. Based on the recent discoveries at Durrington Walls, it's been suggested that people gathered at Stonehenge to celebrate the Summer Solstice Sunrise and Winter Solstice Sunset, (Parker Pearson, 2012) so why can't Stonehenge simply have been a 'monument' celebrating those two "natural phenomena"? After all, the definition of a monument is simply *"a statue, building, or other structure erected to commemorate a famous or notable person or event."*

In stark contrast to the speculations by Parker Pearson et al., it's been suggested that Stonehenge was a site of healing, this based on the Bluestones and Geoffrey of Monmouth's pseudo-historical account, '*The History of the Kings of Britain'* written around 1136 AD. (Darvill and Wainwright, 2009) Monmouth's tale stems from earlier accounts of historical and legendary figures and events, however, it's been deemed by modern historians to be a work of fiction. As the story goes, the wizard Merlin (c. 500 AD) convinced the Britons to raid Ireland and bring the Giant's Ring back to "Mount Ambrius", presumably referring to Amesbury. *"whenever they [the Irish] felt ill, baths should be prepared at the foot of the stones; for they used to pour water over them and to run this water into baths in which their sick were cured. What is more, they mixed the water with herbal concoctions and so healed their wounds. There is not a single stone among them which hasn't some medicinal virtue."* There are a number of obvious issues with the foregoing. First and foremost, it would have meant that the Irish quarried and transported Bluestones from Wales, across the Irish Sea to Ireland, which is highly improbable, that's even assuming the stones referred to in the account were Bluestones. That subsequently the Britons raided Ireland, and transported the stones back to Stonehenge', which begs the question, why would they not have simply quarried and transported their own Bluestones to the site? Beyond that is the fact that Stonehenge was constructed nearly 4,000 years prior to the Monmouth's account. Assuming for the purposes of argument the tale had some degree of truth to it, and accurately represented the cultural belief that Bluestones possessed healing properties, it would have meant the story would had to have been passed down by word of mouth over a period of four millennia, spanning dozens of generations, not to mention a number of different cultures. Moreover, one would expect some reference of this belief to show up in other texts of the time, particularly in Wales, yet there are none. Furthermore, as Darvill and Wainwright believe the ‘Amesbury Archer’ and his ‘companion’ travelled to Stonehenge from an area in the Swiss Alps, because of its renown for being a site of healing – the ‘Lourdes’ of its day – there would have been some reference to it in at least one text in mainland Europe.

In order to connect their speculation as to Stonehenge’s healing properties to the ‘Amesbury Archer’, Darvill and Wainwright claim that among his possessions was a Bluestone chip, yet there’s no evidence of this in the excavation report. What was recorded, are five funerary pots, copper knives, flint arrowheads, a kit consisting of flint-knapping and metalworking tools, including cushion stones that served as portable anvils and some boar's tusks. On his forearm was a black stone wrist-guard, with a similar red wrist-guard. With the second wrist-guard, was a shale belt ring and a pair of gold hair ornaments or earrings.


Beaker vases
Other flints from grave fill
Gold hair ornaments
Arrowheads from grave fill
Flint cache from front of skeleton
Wrist guard
Flint cache from lower skeleton
Arrowheads from lower skeleton
Burial 1291
Flints above & around Beaker
Beaker vases
0
1 m
Flint cache below Beaker

**Artifacts interred with the ‘Amesbury Archer’**

That being said, the remains of the ‘Amesbury Archer’ have been dated to 2470 – 2280 BC, which coincidently is the same time frame for when it’s claimed the Q & R Holes were dug, 2470 – 2200. (Darvill and Wainwright, 2009) This runs contrary to Cleal’s ‘conventional phases’ and Pearson’s ‘revised scheme’ of 2900 – 2600 cal BC. Moreover, it would mean that the Sarsen Circle and Trilithon Horseshoe weren’t erected until around 2300 to 2275 BC, rather than the conventional dates of 2440 – 2100 cal BC and Pearson’s dating of 2580 – 2470 cal BC.

Darvill & Wainwright further support their speculation with respect to the ‘Amesbury Archer’, based on a single sample of charcoal from Q Hole 13 (OxA-18658). However, as discussed in Phase 4i, the radiocarbon dates for all the material they excavated from Q Hole 13 were *“rejected for the purposes of modelling the chronology of the monument”,* yet their model is based on the very material they “rejected” as co-authors of the report, ‘Stonehenge, Amesbury, Wiltshire: Chronological Modelling’. (Marshall, Darvill, Parker Pearson & Wainwright, 2012)

| Context | Material | Lab Ref. | RC Age (BP) | Calibrated Date Range (95% confidence) |
|---|---|---|---|---|
| Q Hole 13 | Charcoal | OxA-4836 | 336 ± 23 | 1465 – 1645 cal AD |
| Q Hole 13 | Carbonised cereal grain | OxA-18657 | 1134 ± 24 | 870 – 985 cal AD |
| Q Hole 13 | Charcoal | OxA-18658 | 3847 ± 27 | 2470 – 2200 cal BC |
| Q Hole 13 | Charcoal | OxA-18659 | 3449 ± 24 | 1880 – 1690 cal BC |
| Q Hole 13 | Carbonised cereal grain | OxA-18660 | 1187 ± 32 | 720 – 950 cal AD |
| Q Hole 13 | Animal bone, pig | OxA-18661 | 402 ± 24 | 1440 – 1620 cal AD |

**Darvill and Wainwright’s dates for Q Hole 13, Stonehenge**

## Section 3: Interpretations Revisited

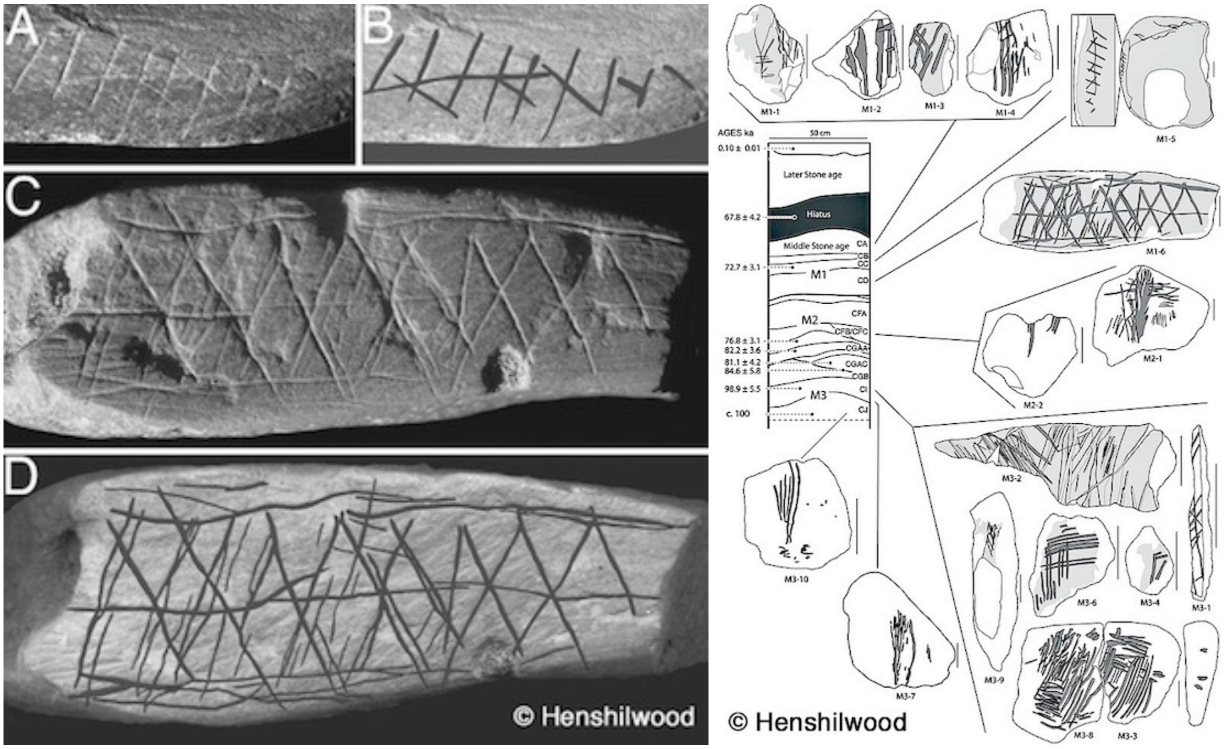
*“As far back as the Upper Paleolithic, through the 19th century, art was predominantly representational. However, for some reason the seemingly unanimous conclusion is that, at least with respect to the Neolithic and Early Bronze Age inhabitants of Ireland and Britain, their art was either overwhelmingly abstract/highly-stylized, having some sort of magico-religious significance, (Shee Twohig, 1981; Eogan, 1986; O’Sullivan, 1993) or entoptic visions by shamans of form constants while under altered states of consciousness, (Eichmeier and Höfer, 1974; Bradley, 1989; Sherratt, 1991; Le Roux, 1992, 101; Lewis-Williams and Dowson, 1993; Dronfield, 1993; 1994; 1995; 1996a; Lewis-Williams and Pearce, 2005) again non-representational magico-religious symbolism.”* (Moriarty, 2010) While the two foregoing

interpretations were discussed in ‘Petroglyphs: The Bend of the Boyne’, there are a number of additional points that need to be addressed.

The belief that shamans carved the panels of art, seems to stem in part from the fact that some partial remains were discovered within the chambers of passage mounds at sites such as Newgrange. Therefore, passage mounds were presumed to have been constructed as funerary structures. As such, there existed a religion, presided over by shamans. The end result of this flawed reasoning, is that the panels, and even their positioning within and surrounding the mounds, or in many cases the landscape, are presumed to have had some ‘magico-religious’ significance. However, “*absolutely nothing proves the existence of shamans during the Irish Neolithic, nor practices of this kind related to the collective tombs of this period.”* (Robin, 2008)

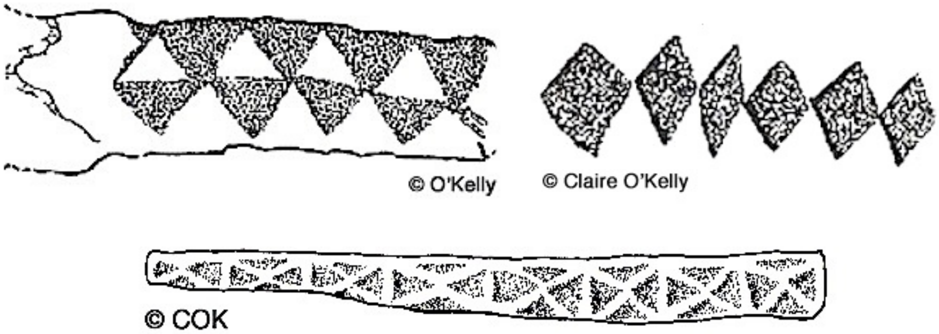
Though hallucinogenic plants and fungi may well have existed during the Neolithic in Ireland and the UK, there is no evidence those substances were consumed. Moreover, in view of the relatively limited number of symbols, most of which are nothing more than variations on a theme, it would have meant that every shaman throughout Ireland and the UK, over the course of 2,000 years or more, spanning a number of cultures, all experienced roughly the same hallucinations. With all the studies done on the effects of hallucinogenic substances, none have ever produced any scientific evidence that two individuals, much less thousands, have ever shared the same hallucination.

With respect to the art being ‘abstract’, the term not only implies that the artists chose to depict their ‘subject matter’ in such a fashion, but that they were capable of abstraction. Abstract thinking revolves around language, mathematics, science and social studies. As there is no evidence that the Neolithic and Early Bronze Age inhabitants of Ireland and the UK had a written language, let alone a mathematical system, nor any type of science, beyond calculating the position of the sun and moon at specific times of the year, nor any form of social studies, that interpretation simply doesn’t hold water, yet it’s been suggested that abstract thinking stretches back in time some 77,000 years. However, this speculation is based solely on the researcher’s interpretation of the art being abstract, merely because the symbols are not recognizable as ‘subject matter’ existing in our surroundings. *“People were able to think abstractly, and accordingly behave as modern humans much earlier than previously thought, according to a paper appearing in this week's issue of Science.”* (National Science Foundation, 2002) The paper referred to in the foregoing states, “*In the Eurasian Upper Paleolithic after about 35,000* *years ago, abstract or depictional images provide evidence for cognitive abilities considered integral to modern human behavior. Here we report on two abstract representations engraved on pieces of red ochre recovered from the Middle Stone Age layers at Blombos Cave in South Africa." "A mean date of 77,000 years was obtained for the layers containing the engraved ochres…"* (Henshilwood, 2002)



**Blombos Cave motifs**

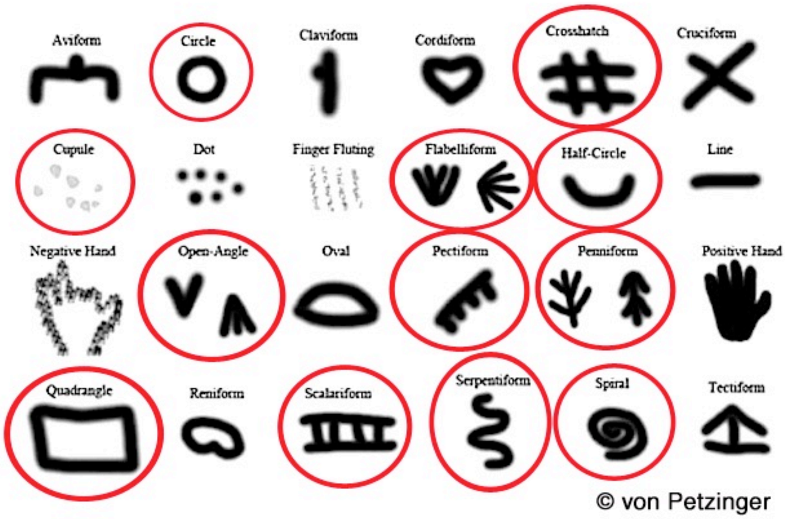
As seen in images A – D, the markings on the two pieces of ochre do exhibit a definite pattern, however, those on the other stones appear to be nothing more than striations, possibly from the sharpening of bone or stone tools. Interestingly, the 'lozenges' on the ochre, have a striking similarity to those at Newgrange, which were carved 74,000 years later.



**Symbols found on corbels (T) and lintel (B), Newgrange**

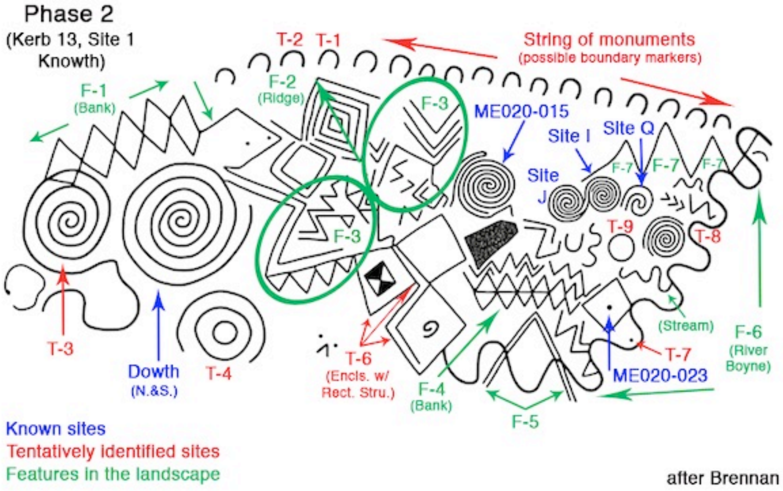
Though the ‘lozenge’, within the context of three panels found in Ireland, depict the angular stones of a bank, their use in the foregoing examples is likely just an artistic design, with no particular meaning.

There were a number of symbols used during the Upper Paleolithic in mainland Europe, many of which match those employed during the Neolithic and Early Bronze Age in Ireland and Britain. Whether they depict the same types of monuments and/or features in the landscape, would be impossible to prove, given that the Paleolithic panels predate those of the Neolithic by 30,000 years or more, so any monuments and features in the landscape, likely no longer exist. (see Glossary, pages 117 – 126)



© von Petzinger

**Paleolithic symbols**

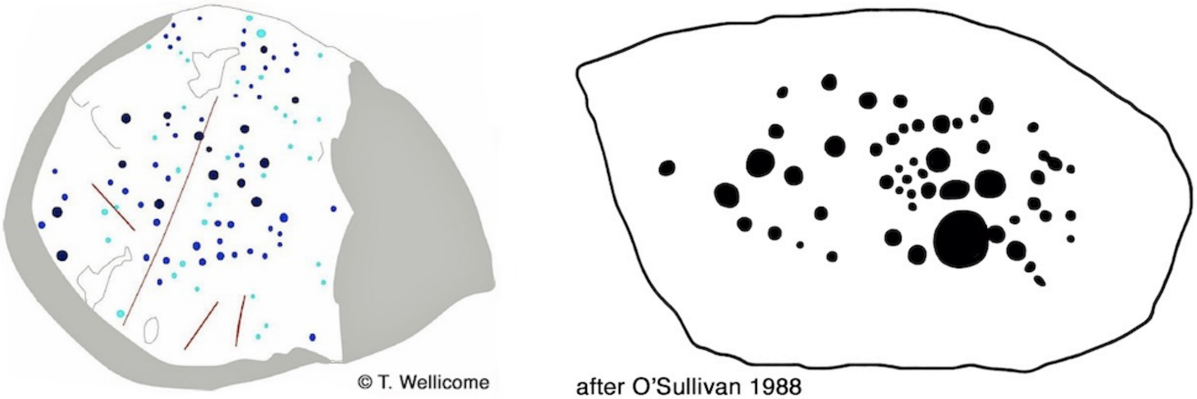


after Brennan

**Panel on K 13, Site 1, Knowth**

There have been attempts to ‘decipher’ the symbols as if they were a language/numerical code. (Thomas, 1994) (Brennan, 1994) However, there are two very obvious problems with this approach.

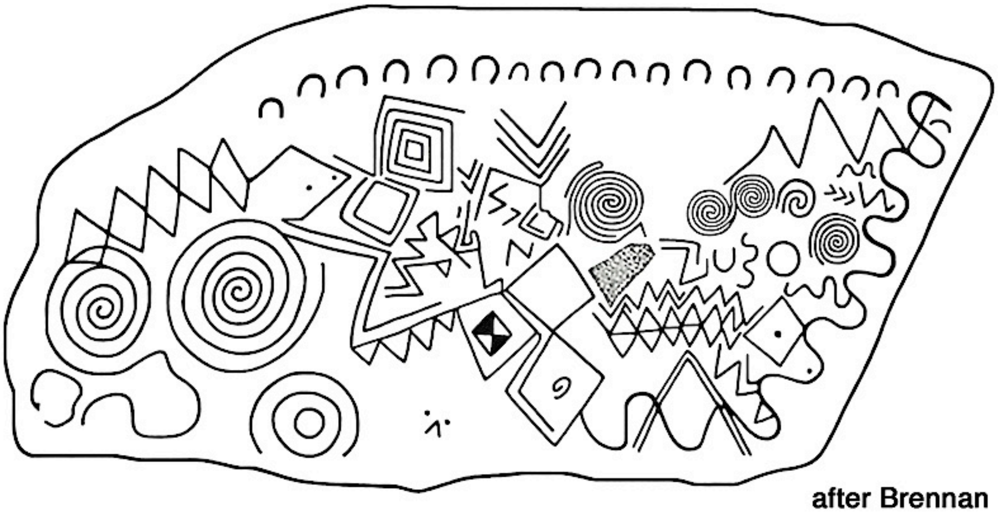
1) The most frequently occurring symbol is the cup, with numerous panels consisting entirely of cups, as in the case of the Trefael Stone or the rear panel on K 13 at Knowth. Applying Brennan’s interpretation that cups depict the sun, (1994) the panels would consist entirely of suns of various sizes. (see charts, page 38)
2) Applying this method to panels such as Kerbstone 13, Site 1 at Knowth, which is simply a ‘map’ of Dowth and the surrounding environs, would result in utter gibberish, as there is no ‘grammatical structure’ to the layout of the symbols. Therefore, the ‘text’ could be read, left to right, right to left, top to bottom, or in the case of Kerbstone 13, diagonally.



© T. Wellicome

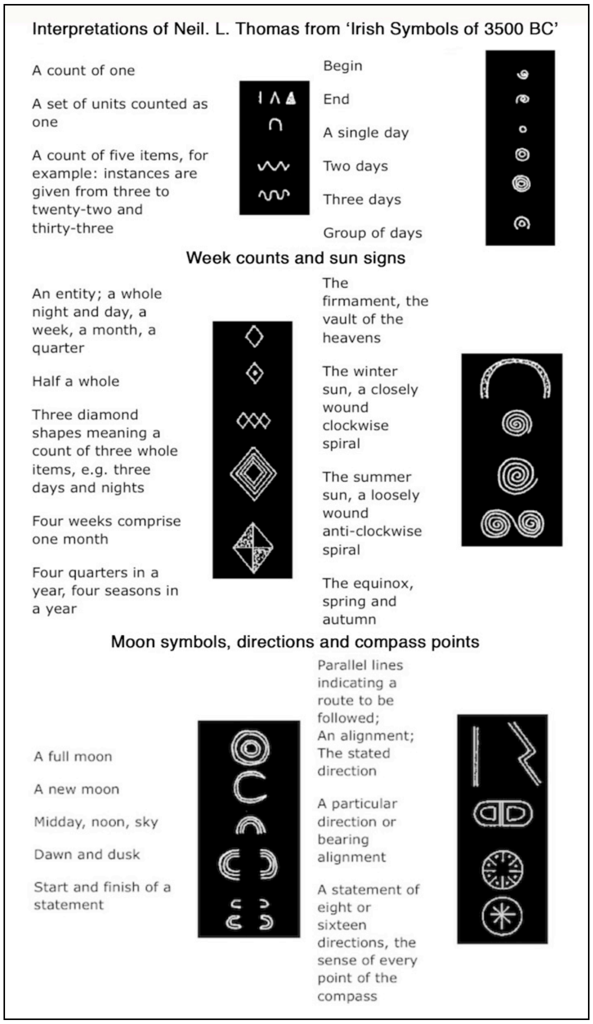
after O’Sullivan 1988

**Trefael Stone, Wales (L) & rear panel on K 13, Site 1, Knowth (R)**



after Brennan

**Front panel on K 13, Site 1, Knowth**



Interpretations of Neil. L. Thomas from 'Irish Symbols of 3500 BC'

A count of one

A set of units counted as one

A count of five items, for example: instances are given from three to twenty-two and thirty-three

Begin

End

A single day

Two days

Three days

Group of days

Week counts and sun signs

An entity; a whole night and day, a week, a month, a quarter

Half a whole

Three diamond shapes meaning a count of three whole items, e.g. three days and nights

Four weeks comprise one month

Four quarters in a year, four seasons in a year

The firmament, the vault of the heavens

The winter sun, a closely wound clockwise spiral

The summer sun, a loosely wound anti-clockwise spiral

The equinox, spring and autumn

Moon symbols, directions and compass points

A full moon

A new moon

Midday, noon, sky

Dawn and dusk

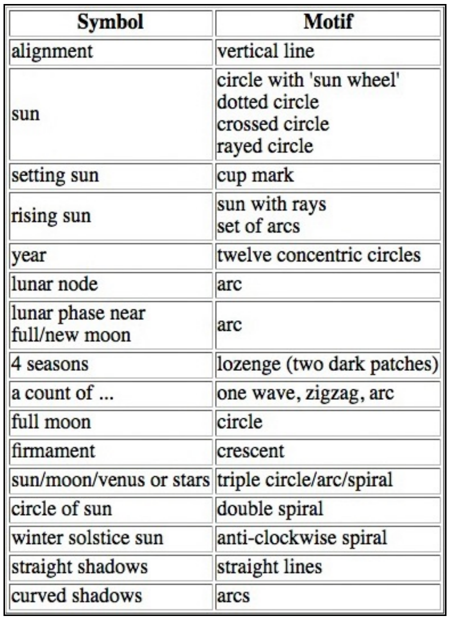
Start and finish of a statement

Parallel lines indicating a route to be followed; An alignment; The stated direction

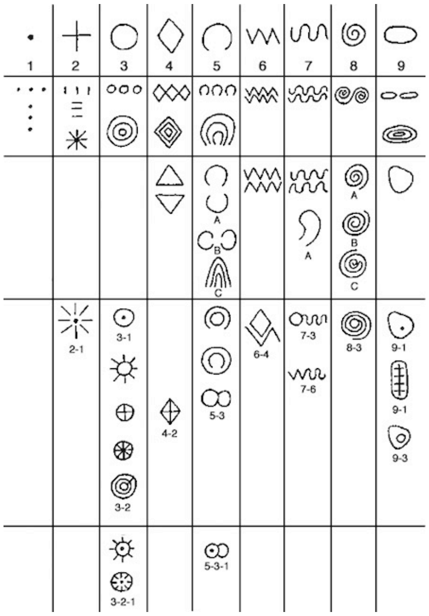
A particular direction or bearing alignment

A statement of eight or sixteen directions, the sense of every point of the compass

**Interpretations by N.L. Thomas**



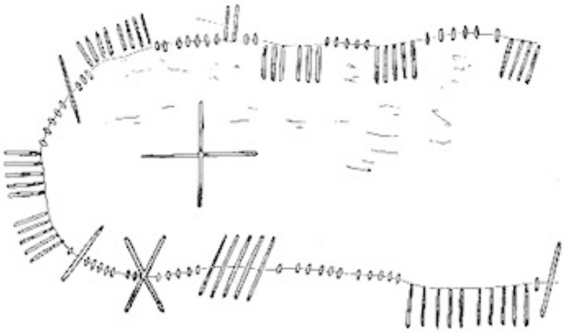
| Symbol | Motif |
|---|---|
| alignment | vertical line |
| sun | circle with 'sun wheel'<br>dotted circle<br>crossed circle<br>rayed circle |
| setting sun | cup mark |
| rising sun | sun with rays<br>set of arcs |
| year | twelve concentric circles |
| lunar node | arc |
| lunar phase near full/new moon | arc |
| 4 seasons | lozenge (two dark patches) |
| a count of ... | one wave, zigzag, arc |
| full moon | circle |
| firmament | crescent |
| sun/moon/venus or stars | triple circle/arc/spiral |
| circle of sun | double spiral |
| winter solstice sun | anti-clockwise spiral |
| straight shadows | straight lines |
| curved shadows | arcs |



**Interpretations by Martin Brennan from 'The Stones of Time'**

Considering the fact that the inhabitants during the Neolithic were intelligent enough to erect structures such as Knowth, Newgrange and Stonehenge, as well as calculating lunar and solar events, they were certainly intelligent enough to have employed some form of 'grammatical structure' to a written language, something which transcends cultures and time, from Egyptian Hieroglyphics, c. 3200 BC to Celtic Ogham Script around the 4th century AD.

**Egyptian Hieroglyphics**



**Celtic Ogham Script**

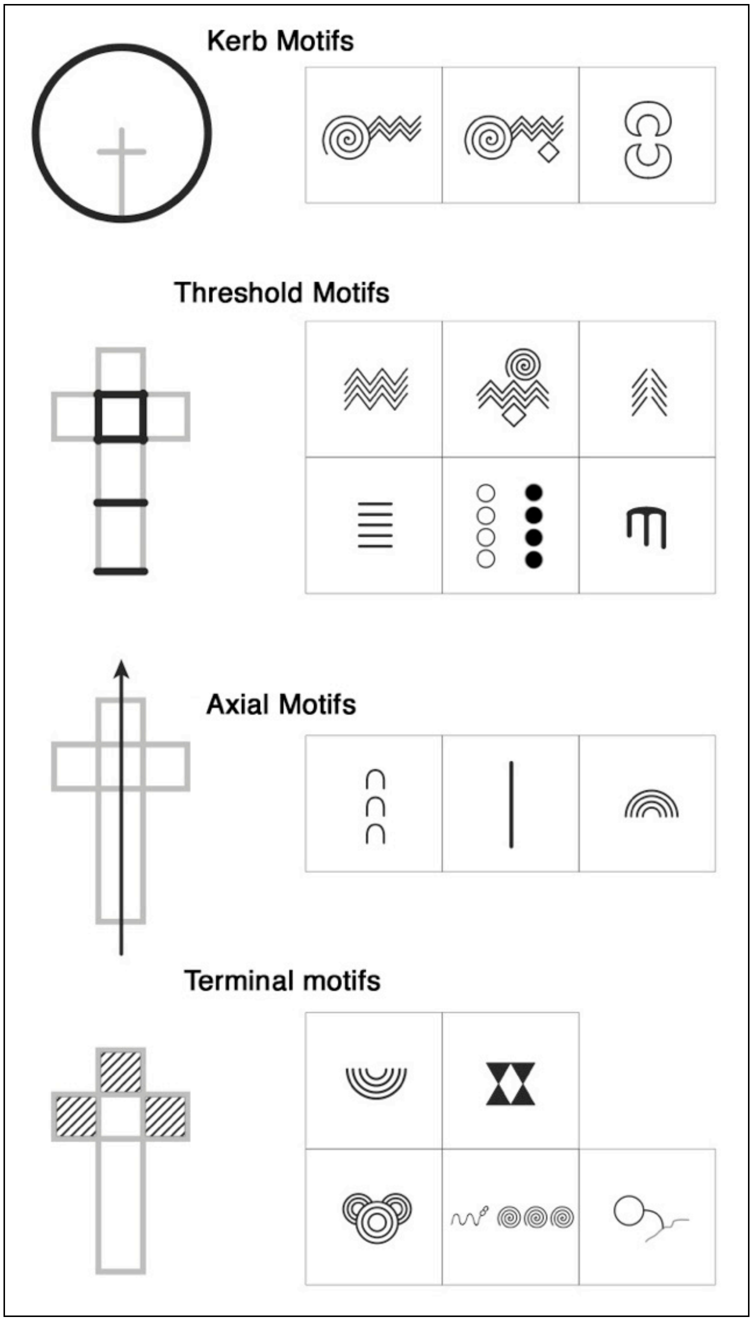
**Section 4: Analyses of the Symbols**

*"To seek the law of the signs, it is to discover things which are similar". This quotation of M. Foucault (1966: 44), extracted from its initial context, summarizes well the original reasoning of the present research work. The "signs" in question here are those which decorate the walls of the Neolithic passage tombs located around the Irish Sea and their "law" is that which organizes their layout in space."* (Robin, 2008) For his Ph.D. thesis, Robin conducted countless spatial analyses, both with respect to the placement of the symbols on the stones, and the positioning of the stones within and surrounding monuments. "*The outcome of these spatial analyses has been the discovery of a new set of different 'grammatical rules' that organises the art into space."* (Robin, 2009)

In order for there to be a 'law of the signs' or 'grammatical rules', one first must know what the signs mean. Take for example Einstein's Law of Special Relativity, $E = mc^2$. Without knowing what each of the 'signs' in that equation represent, and how they interrelate within the context of that 'statement', one cannot possibly conclude that it's a 'law'. However, according to Robin, knowing what the symbols mean wasn't necessary in discovering his 'grammatical rules. *"Our aim was above all to identify their grammar (spatial organization) without seeking to understand their meaning (interpretation)."* (Robin, 2008) Ironically though, Robin breaks the motifs down into four (4) categories; Kerb, Threshold, Axial and Terminal, so in a sense he has 'interpreted' the motifs as having some degree of meaning. That said, the words 'rule' and 'law' are defined by the New Oxford American Dictionary as:

**Rule**: *"a law or principle that operates within a particular sphere of knowledge, describing or prescribing what is possible or allowable."*

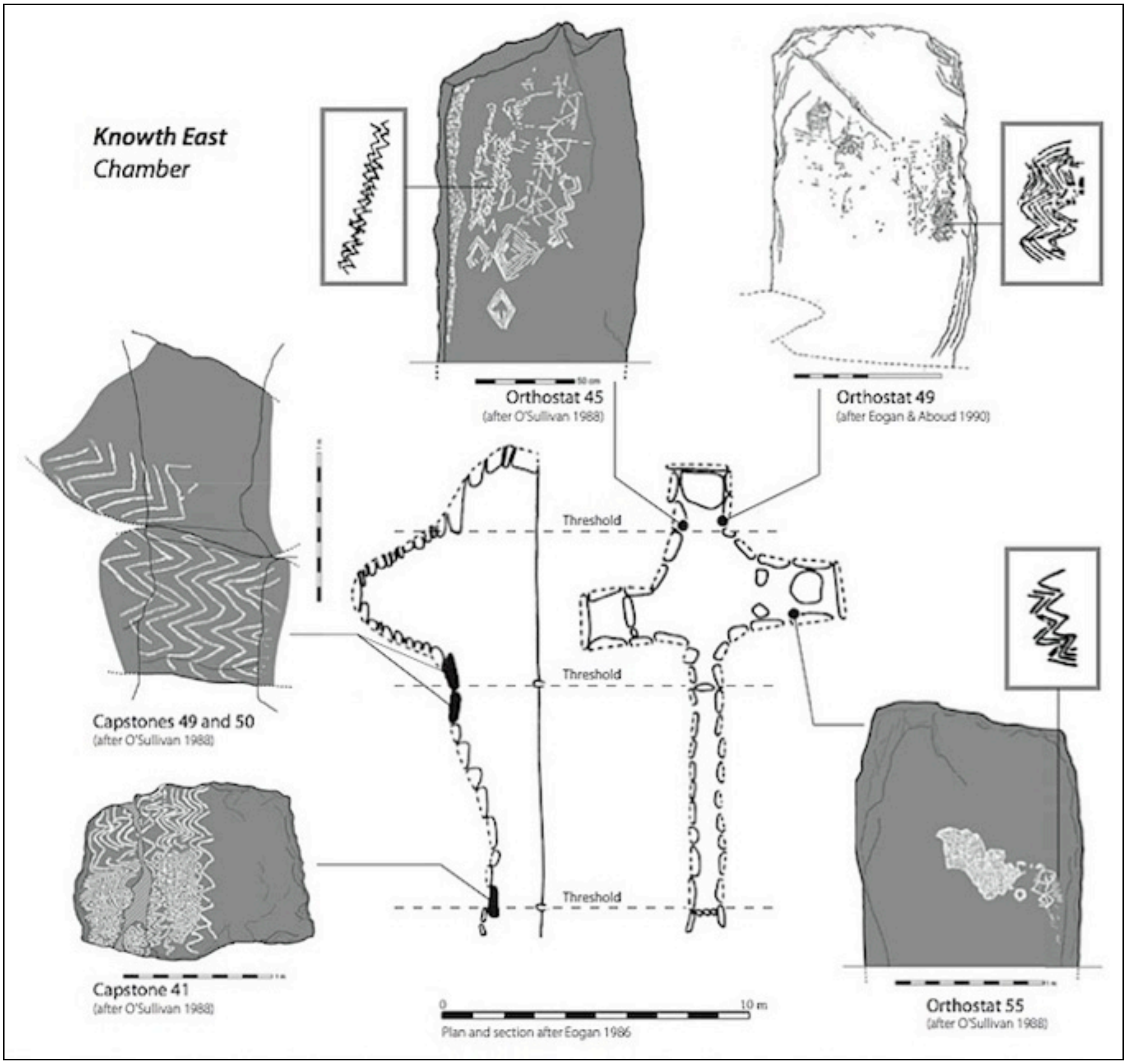
**Law**: *"a statement of fact, deduced from observation, to the effect that a particular natural or scientific phenomenon **always** occurs if certain conditions are present."*



**Robin's motif categories**

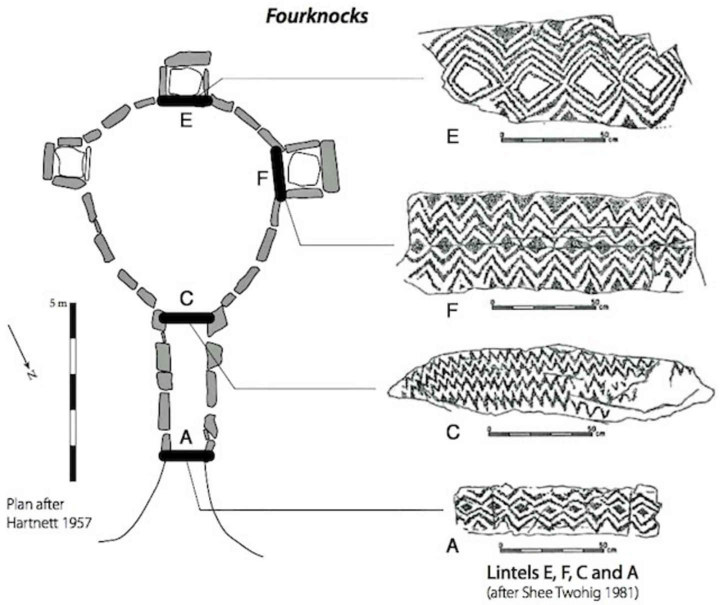
With regards to the ‘kerb motifs’, the three Robin cites are found on an extremely limited number of kerbstones out of hundreds known to exist, at an extremely limited number of sites, this out of the hundreds of passage mounds around the Irish Sea, with likely hundreds yet to be discovered. While these symbols may be limited to kerbstones, at least in the few examples he discusses, this in no way establishes a ‘law’ or ‘rule’.

Of the six ‘threshold motifs’ Robin has purportedly discovered, lines of parallel chevrons/zigzags appear to be the most frequently employed, as seen in the illustration below, though in each example the motifs are of varying sizes and carved in diverse positions.



**Robin’s ‘threshold motifs’, Site 1, Knowth**

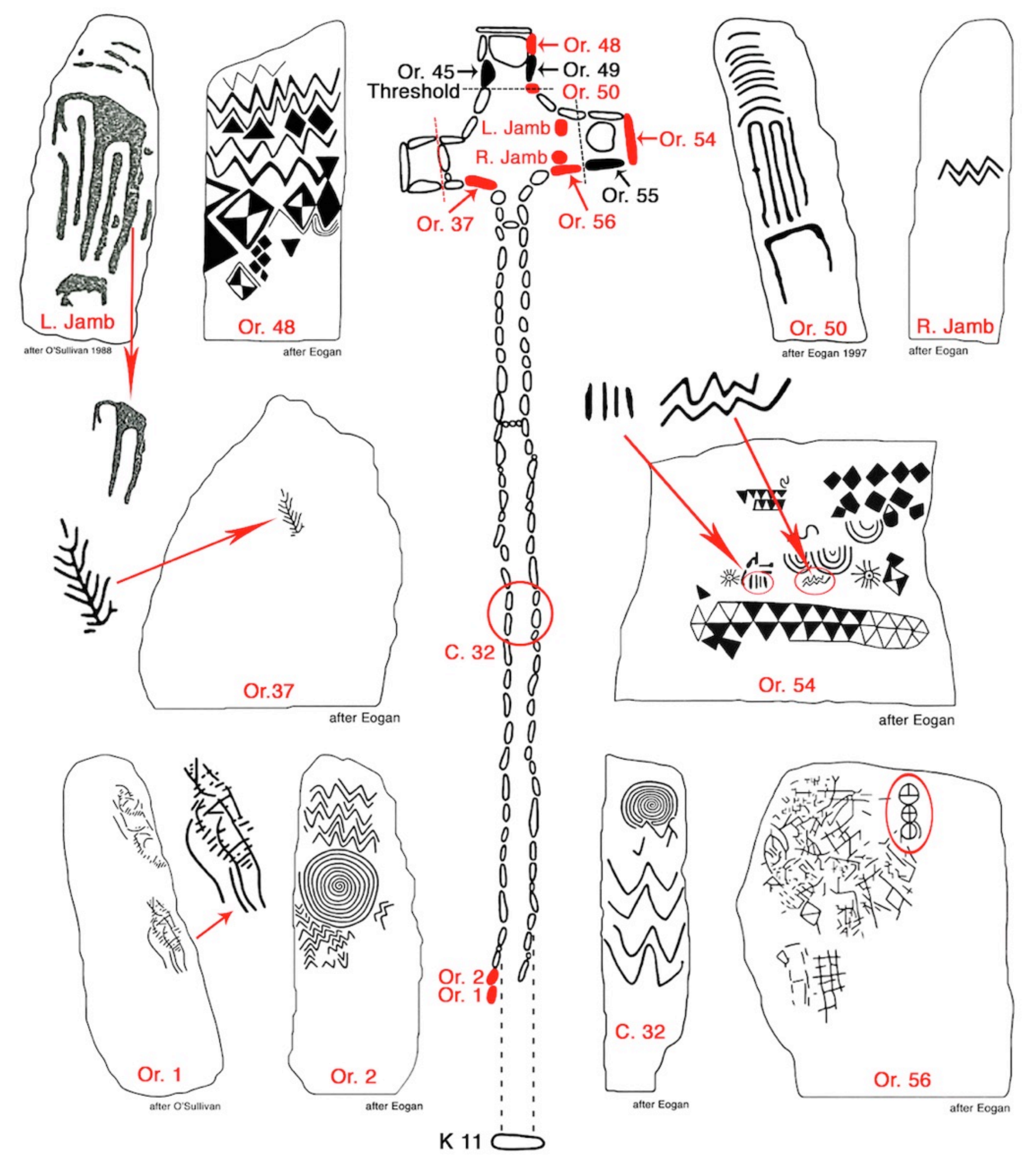
With respect to the parallel chevrons/zigzag motifs, *"from a graphical point of view, its principal axis creates a line, a limit between two spaces, but the series of opposed Vs of the motif also represents two opposite directions, or a series of passages backward and forward from one space to another."* (Robin, 2012) This begs the question, why are chevrons/zigzags not present on the lintel of the left-hand recess at Fourknocks, as well as the lintels at other sites.



**Plan of Fourknocks**

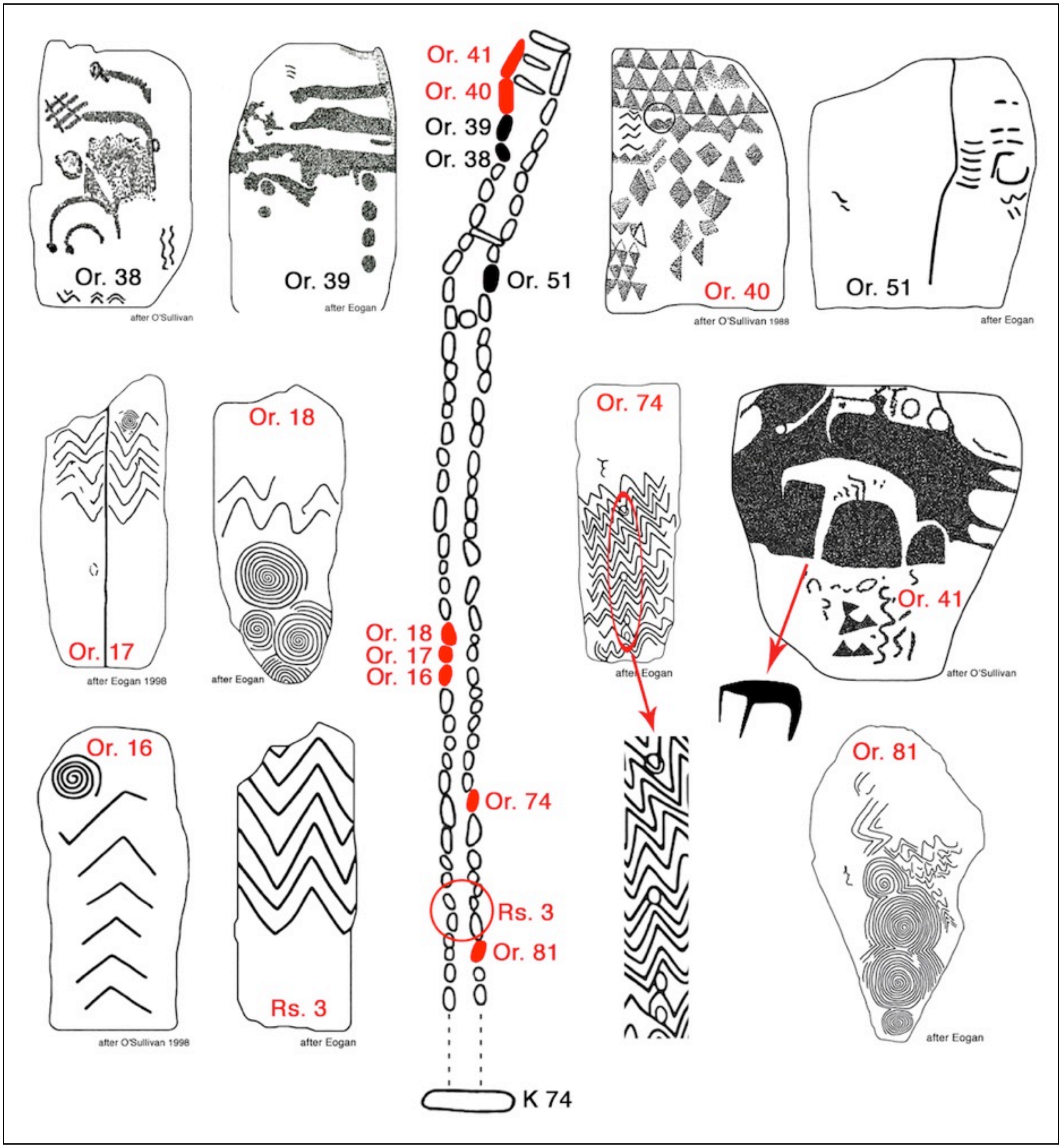
Robin's interpretation of this symbol, gets back to the issue discussed in Section 3, that there is no evidence whatsoever the builders were capable of abstract thinking. The more logical explanation is that the artist(s) simply 'adopted' the symbol as a form of decoration. Throughout time symbols have been 'adopted' by different cultures. The most notable perhaps is the spiral, in particular the triple spiral. In the case of the spirals found within the Boyne Ensemble, they were likely inspired by the manner in which the mounds were constructed, i.e., a spiral ramp. (Moriarty, 2010) Fast-forward several millennia, the spiral, along with various knot designs, were used by the Irish Monks simply to decorate their manuscripts, who never assigned any meaning to the symbols. In more recent times, the spiral has been 'adopted' to signify life-death-rebirth or lunar phases.

Aside from the foregoing, there are several additional orthostats displaying 'threshold motifs' within Site 1. Having 'defined' the thresholds as seen in the illustration above, the other stones fall on either side of those liminal spaces, with the exception of Or. 1, thus violating Robin's 'threshold rule'. (see illustration on following page)



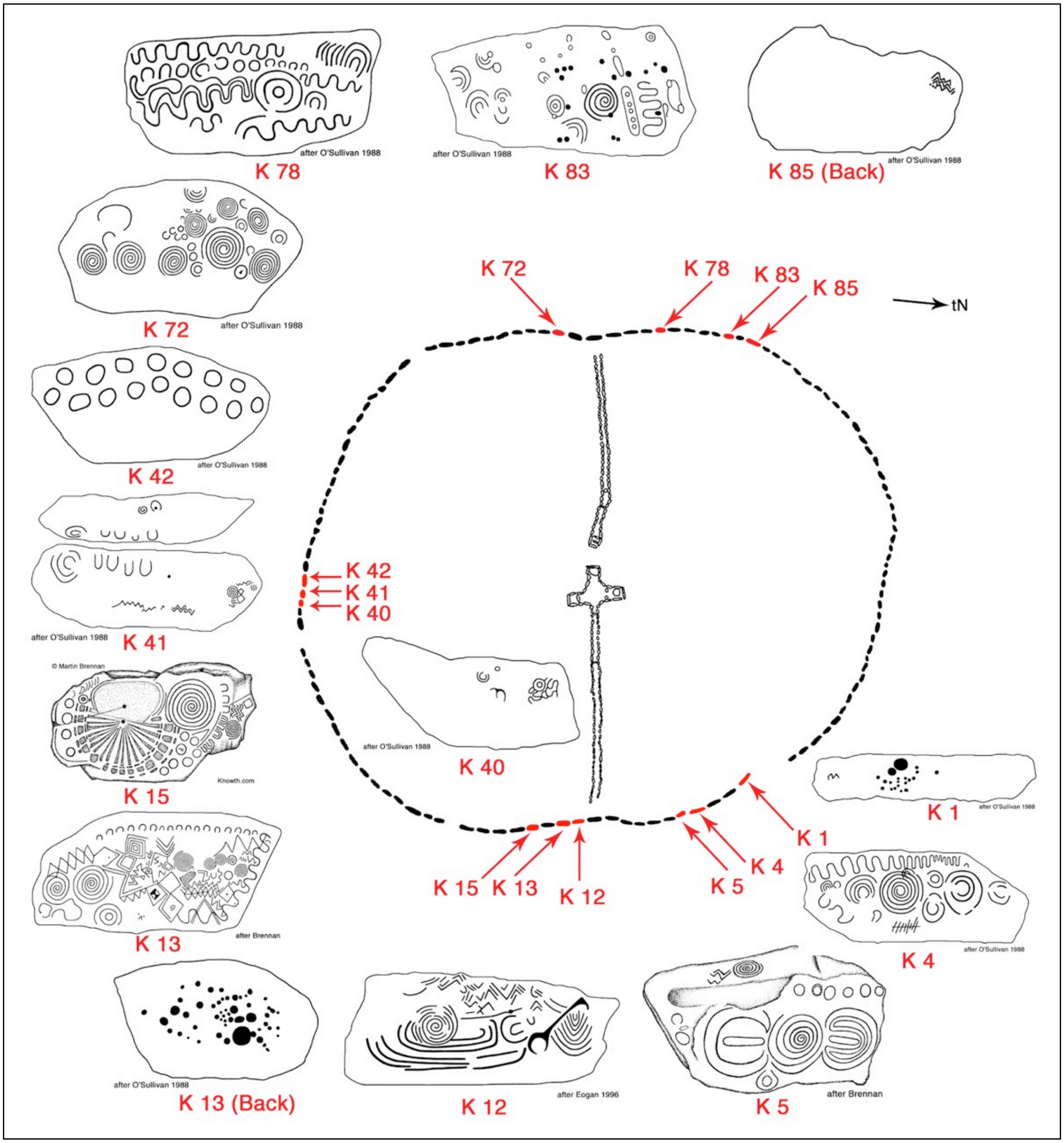
**Orthostats with 'threshold motifs', Eastern Passage of Site 1, Knowth**

In the case of the Western Passage, Robin identifies three stones; Or. 38, Or. 39 and Or. 51 as exhibiting a 'threshold motif', though none are located on the thresholds of the passage, in violation of his own 'rule'. Moreover, he fails to mention the additional orthostats displaying his 'threshold motifs', only one of which, Or. 41, is on a threshold, though Robin indentifies it as being within the "internal limits in Knowth". (see illustration on following page)



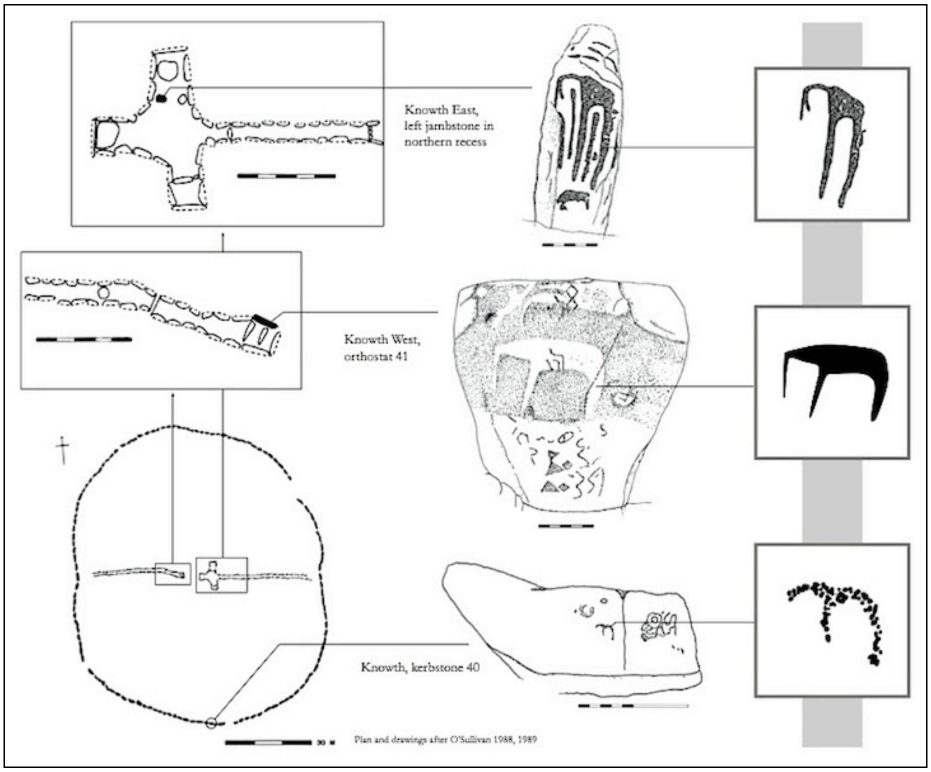
**Orthostats with ‘threshold motifs’, Western Passage of Site 1, Knowth**

In addition to the stones found within the Eastern and Western Passages, there are numerous kerbstones of Site 1 at Knowth that also exhibit Robin’s ‘threshold motifs’, none of which can even remotely be considered as being on a threshold, unless of course the symbols have an entirely different meaning than those found within the mound, though that seems highly unlikely. Here again, this violates Robin’s ‘threshold rule’. (see illustration on following page)

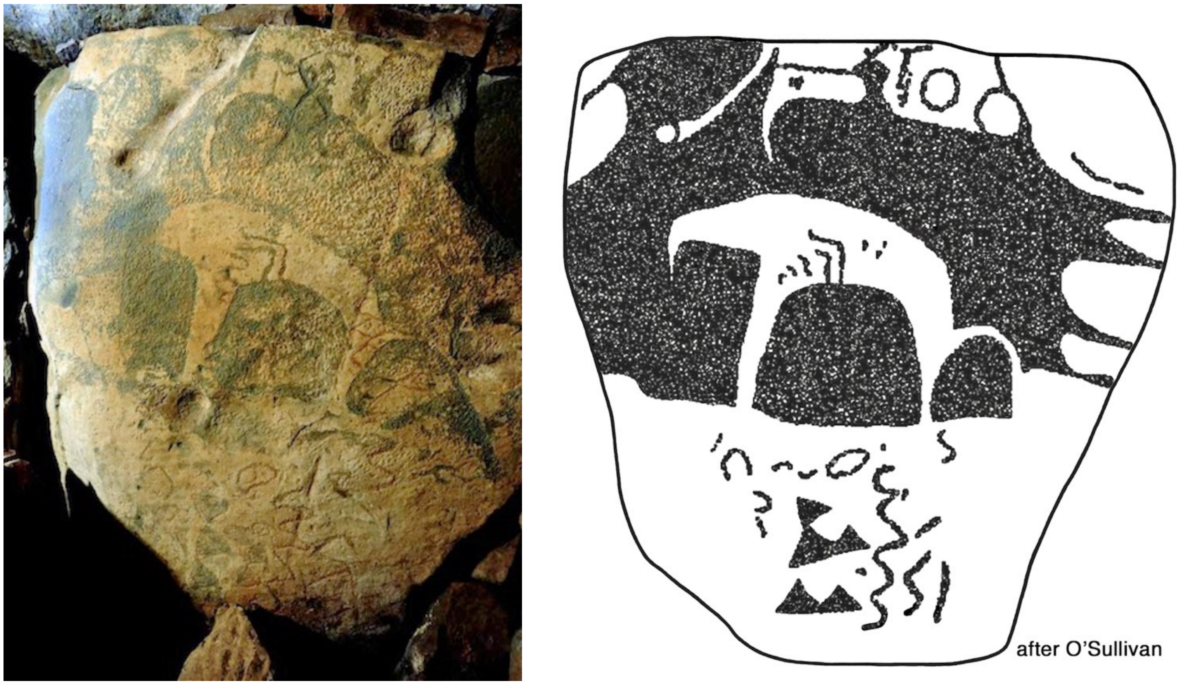


**Kerbstones with 'threshold motifs', Site 1, Knowth**

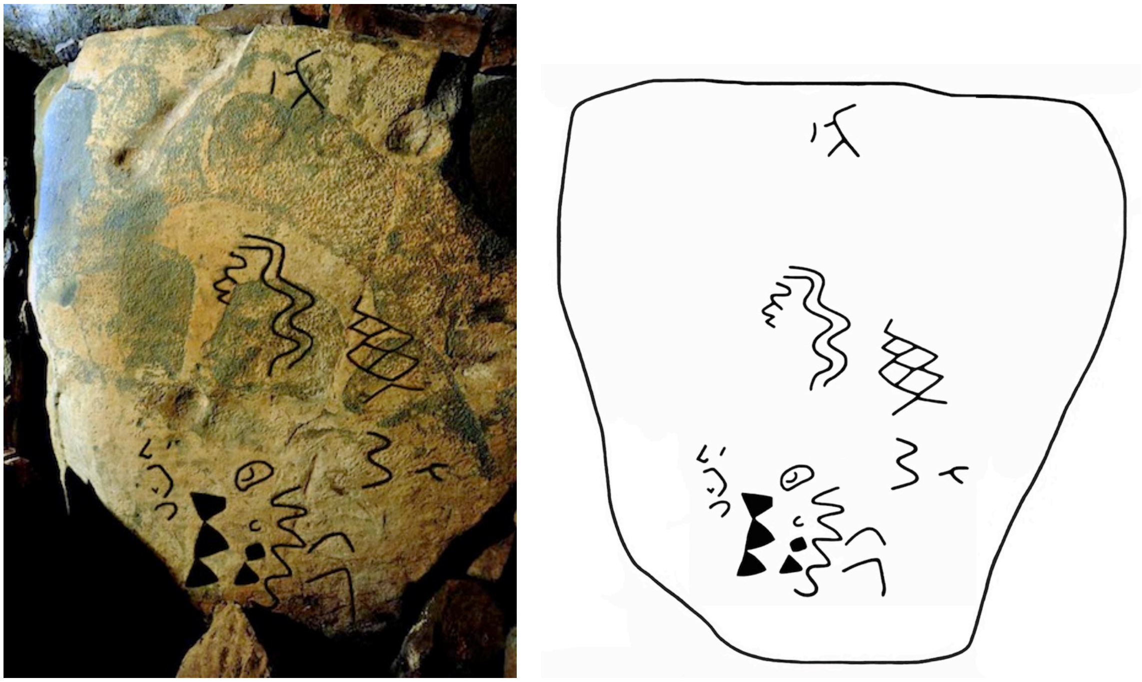
One symbol, which Robin terms the 'n°2 sign', is shown as being located within the "internal limits in Knowth", yet in his chart he identifies it as being a 'threshold motif'. While the three examples resemble each other, in the case of the Left Jambstone, Robin has not included the other vertical lines within the symbol. (see drawing, top of page 46) Moreover, based on a photo of Or. 41, it's quite apparent that many of original symbols on the stone were picked dressed over, with the intention of grinding down the picked areas, and then either 'updating' the symbols or to carve an entirely new panel. In view of the evidence, O'Sullivan completely misinterpreted what appears on the stone. (see photos and drawings, bottom of page & top of following page) (also see Section 17 of 'Petroglyphs: The Bend of the Boyne)



**Robin's 'n°2 motif' and the 'internal limits' of Site 1, Knowth**

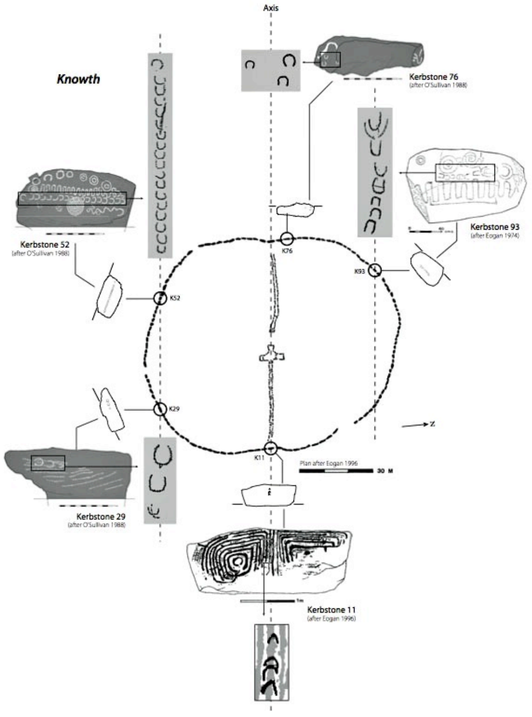


**Or. 41, Western Passage, Site 1, Knowth**



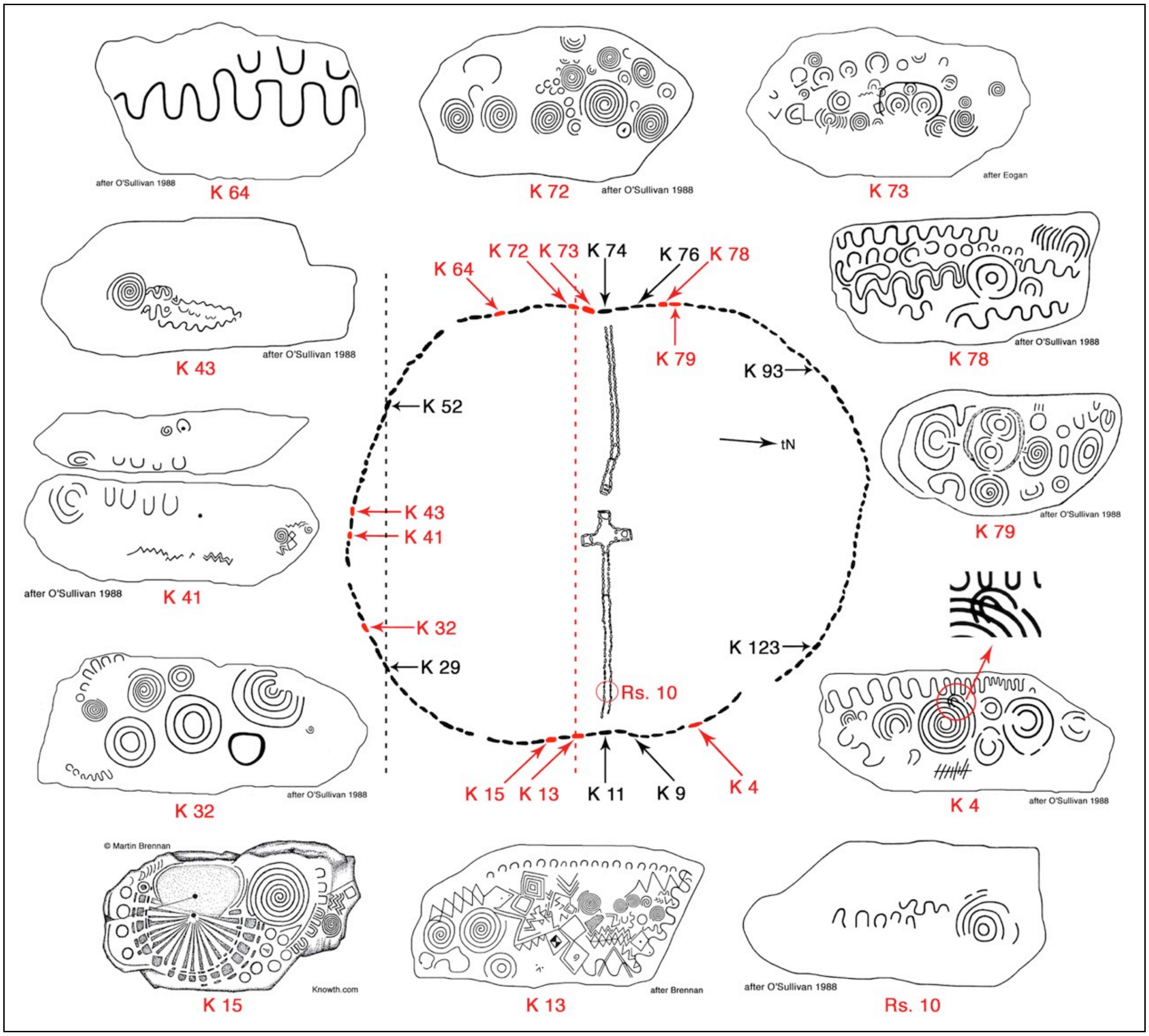
**Or. 41 showing actual motifs**

The third category of signs are the ‘axial motifs’. *“By examining the relationships between this motif and the architecture of the tombs, I have shown that in each case, the orientation of the arcs row corresponds to the orientation of the axis created by the passage and chamber of the monuments.” (Robin, 2009)*



**Robin’s ‘axial motifs’, Site 1, Knowth**

Aside from the foregoing kerbstones that exhibit Robin's 'axial motifs', there are additional kerbstones that also display one or more of them.



**Kerbstones with 'axial motifs', Site 1, Knowth**

An axis exists between two fixed points, e.g., earth's North and South Poles, however, in this case there is no row of simple arcs on K 74, which is diametrically opposite K 11. That being said, this raises a number of issues and questions with respect to Robin's interpretation.

1) Absent a second fixed point, any stone could be viewed as being on the axis of the mound, and thus any symbol on those stones considered an 'axial motif'.
2) The arcs on K 11 have been nearly obliterated by the horizontal and vertical lines carved at some point after the arcs were carved. Given the reuse of stones, it's extremely

unlikely the arcs were ever ‘axial motifs’. The only motif on K 11 & K 74 that falls along the axis of the mound, are the centerlines. However, as discussed in ‘Petroglyphs: The Bend of the Boyne’, (Sections 2 & 4) the centerlines, and surrounding vertical and horizontal lines, were employed in calculating lunisolar events. This gets back to the issue of just how important it is in knowing the meaning of the symbols, and how they interrelate and the purpose of the panels. (see Glossary, pages 117 – 126)

3) As for K 76 & K 93, again there is no second fixed point, which would be between K 76 & K 9 and K 93 & K 123, however, neither stone exhibits such symbols.

4) The arcs on K 76 don’t form a single row, and even those on K 29 & K 93 are off-center and of varying sizes. Given that the builders were intelligent enough to design and construct such a massive and complex monument, they surely were capable of carving a straight line of simple arcs.

5) If in fact the arcs did mark axis lines, then one would expect the rows would be in-line with the axis of the mound, yet the faces of the stones are at an angle to the axis, as seen in Robin’s illustration.

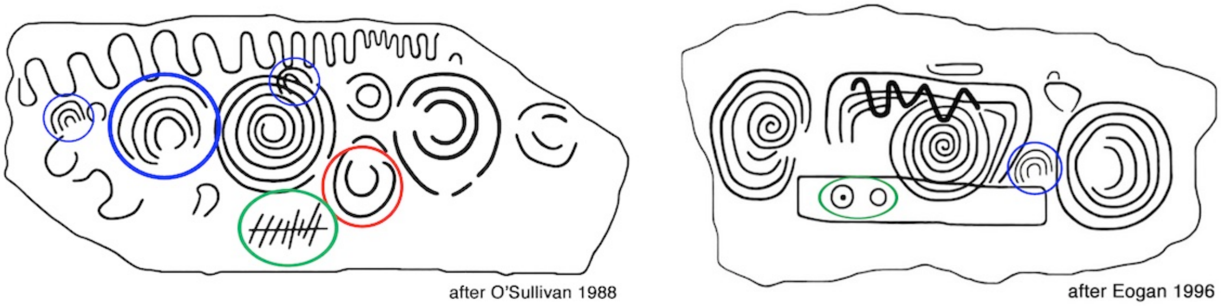
6) What is the relationship between the arcs and the other symbols on the stones?

7) What would have been the purpose in the builders carving ‘axial motifs’?

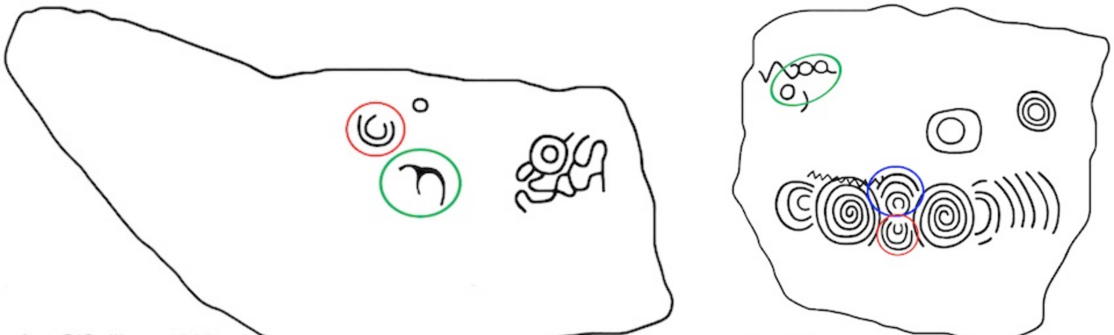
It should be apparent at this point that the flaw in Robin’s methodology is that each symbol, in every example he cites throughout his Ph.D. thesis and articles, has been taken out of context and analyzed separately. *“We have learnt from linguists that signs taken separately do not have any meaning, that each of them represents a gap of meaning between itself and the others, rather than it expresses a meaning.”* (Cassen, 2004) *“an irrefutable hypothesis simply imposes some meaning on the art, without effectively paying any attention to its content or context.” “Only unrefuted refutable conjectures deserve any confidence at all.”* (O’Farrell)

While Robin’s analyses of the symbols at first glance seems to be at least somewhat plausible, that’s merely due to the fact that he’s ‘cherry-picked’ the symbols, stones and monuments in order to support his hypothesis. When viewed collectively, and tested just at Site 1 of Knowth, his hypothesis immediately comes unraveled.

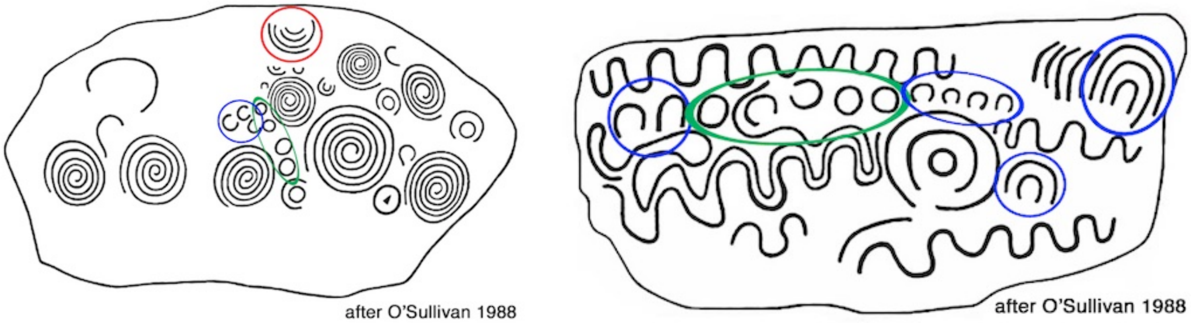
Aside from the foregoing stones, there are several kerbstones at Knowth which have been carved not merely with one of Robin's 'motifs', i.e., kerb, threshold, axis and terminal, but with a combination thereof. (Note: Green = Threshold, Blue = Axial, Red = Terminal)


after O'Sullivan 1988
after Eogan 1996

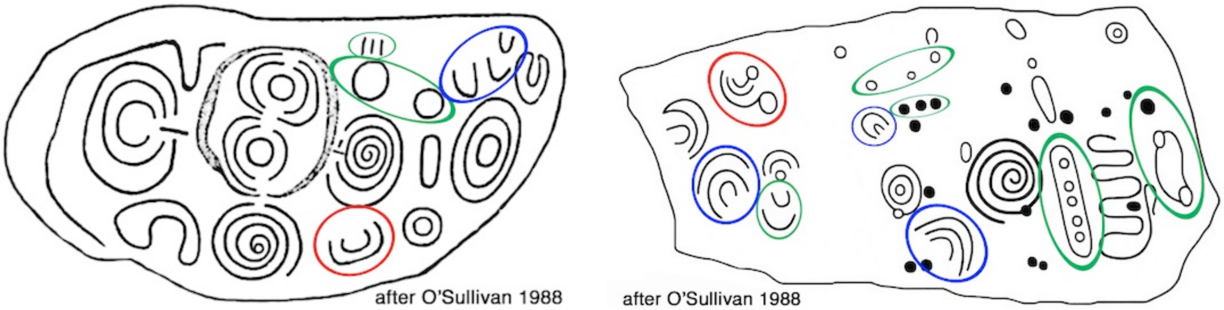
**K 4 & K 10, Site 1, Knowth**


after O'Sullivan 1988
after O'Sullivan 1988

**K 40 & K 65, Site 1, Knowth**


after O'Sullivan 1988
after O'Sullivan 1988

**K 72 & K 78, Site 1, Knowth**


after O'Sullivan 1988
after O'Sullivan 1988

**K 79 & K 83, Site 1, Knowth**

Based on the evidence presented in ‘Orthostat: The Mound of the Hostages’, ‘Petroglyphs: The Bend of the Boyne’, as well as Section 6 – 19 of this paper, the panels on many of the stones throughout Ireland, the UK and France, depict the sites, or areas within sites, and in some cases features in the landscape, as they existed during the Neolithic and Early Bronze Age. As these symbols were employed over the course of two millennia, by thousands of artists, it’s little wonder many of the symbols on the panels are similar, are found in similar locations on the stones, and the stones found in similar positions.

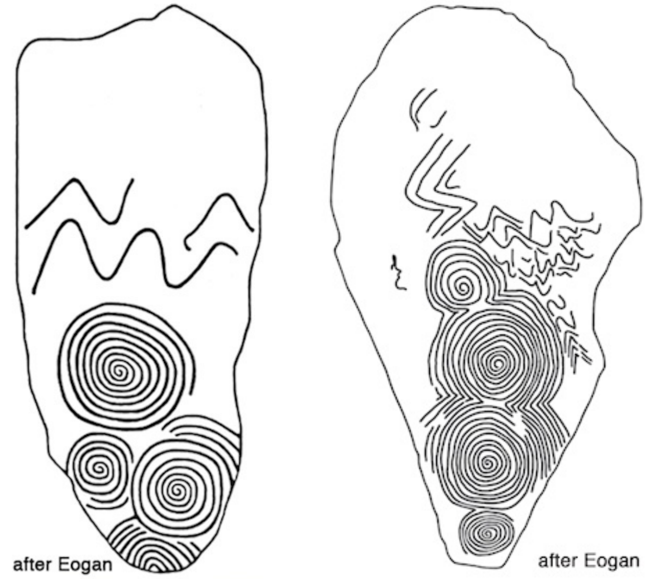
If there were any ‘law’ or ‘rule’ with respect to the symbols, it was for a number of very simple reasons:

1) The symbols were dictated by the type of monument or feature in the landscape being depicted. Even then, one has to factor in 'artists choice', i.e., a monument or feature in the landscape could have been depicted in any number of different styles.
2) The size and spatial relationship of the symbols, was dictated by size and spatial relationship of the monuments and/or features in the landscape, which in the case of the monuments, were dictated by an individual’s status within the community.
3) The positioning of the symbols was also dictated by the contours and flaws of the stones, though in some cases the latter were incorporated into the panel.
4) The limited surface area on which to depict the monuments also dictated, to some extent, the positioning of the symbols.
5) The size and orientation of additional symbols, may also have been dictated by those carved decades earlier.
6) As for the placement/orientation of the stones, i.e., orthostats, capstones, kerbstones, lintels and sillstones within and surrounding the monuments, this was dictated by the structural requirements of the builders, just as any stonemason today would select the type, size and shape of a stone to be employed. *“For instance, the decorated surface of a capstone may have been placed to the top or to the bottom. In view of the fact that the decoration did not extend all over the face, it may be assumed that they originally served as orthostats, with the undecorated portions being in the socket. When they were re-used as orthostats, most were placed upside-down in relation to their former positioning.”* (Eogan, 1998)

With respect to the reuse of stones, *“The different syntax rules identified reveal a model of spatial representation that determines not only the location of the signs but also the location of monument structures... Moreover, those rules make it possible to reconstruct the initial position of reused stones whose carvings, set in a secondary position, are disorganised.* (Robin, 2009) Robin breaks down his method of reconstruction into three parts:

**Robin’s Rule #1***: “The shape of the stone: any stone naturally presents a broader or thicker end and a thinner end so that its placement in [the] vertical position can be done intuitively in only one way, placing the centre of gravity of the object in low position...”*

Though Robin is correct that Or. 18 & Or. 81 in the Western Passage of Site 1 at Knowth, once stood with the carvings on the upper face of the stones, their current orientation violates Rule #1, as the thinner end on both were set in the sockets when used to construct the Western Passage. This gets back to the point raised in Item 6, that the placement/orientation of the stones was dictated by the needs of the builders.

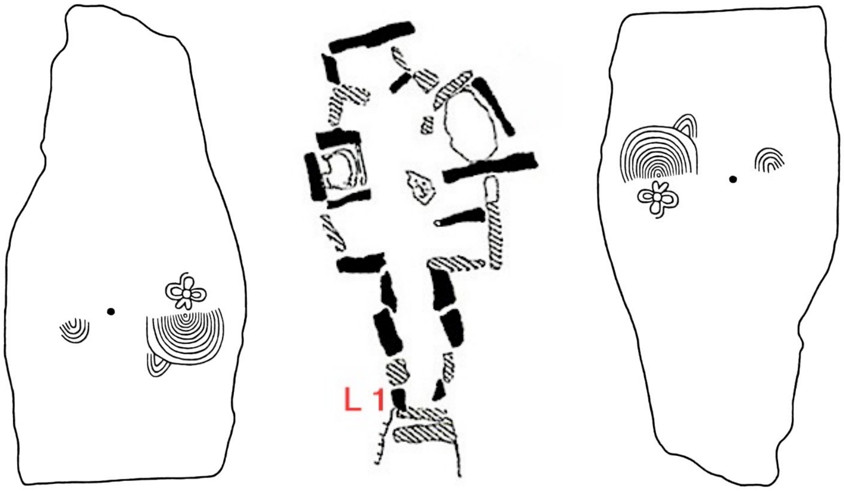


after Eogan

after Eogan

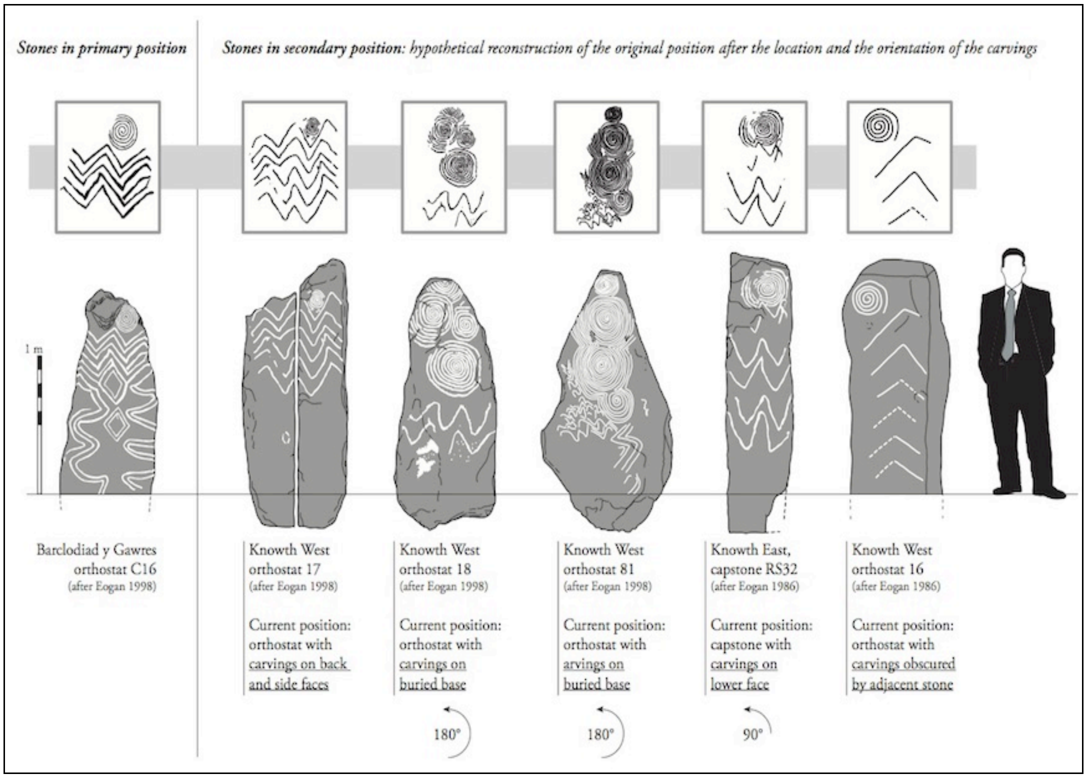
**Or. 18 (L) & Or. 81 (R), Knowth West**

Taking the foregoing a step further, in their current orientation, the three symbols on Or. L 1 within Cairn L, Loughcrew are ‘terminal motifs’, yet the stone is positioned at the entrance to the mound, in violation of Robin’s ‘threshold rule’. In view of the fact that there are no carvings on the upper face of the stone, its original orientation, according to Robin’s Rule #2, would place the symbols at the top of the stone, making them ‘axial motifs’. However, by doing so it would violate Rule #1. (see drawings on following page)



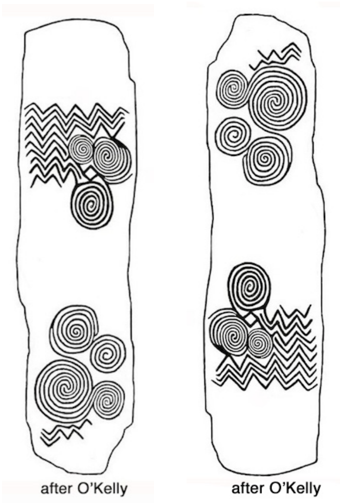
**Or. L 1 of Cairn L, Loughcrew**

**Robin's Rule #2:** *"The location of the carvings: all the stones used as structural elements inside passage tombs present, according to their arrangement, a visible face and less visible and invisible parts. In the case of vertical stones (orthostats or kerbstones), the carvings are generally concentrated on the top central part of the emerged part (i.e. outside the socket) of the main face. The end of a reused stone, where the carvings are concentrated, will then be intuitively placed upwards in a reconstruction."*

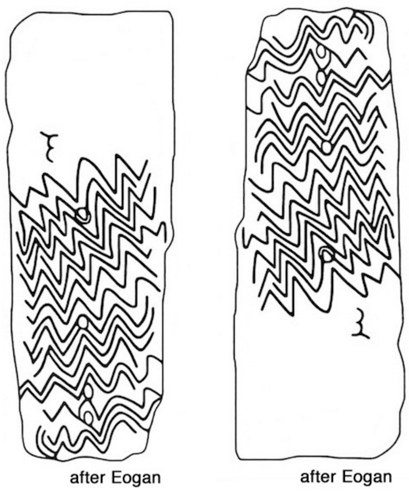

Stones in primary position
Stones in secondary position: hypothetical reconstruction of the original position after the location and the orientation of the carvings
1 m
Barclodiad y Gawres orthostat C16 (after Eogan 1998)
Knowth West orthostat 17 (after Eogan 1998)
Current position: orthostat with carvings on back and side faces
Knowth West orthostat 18 (after Eogan 1998)
Current position: orthostat with carvings on buried base
180°
Knowth West orthostat 81 (after Eogan 1998)
Current position: orthostat with arvings on buried base
180°
Knowth East, capstone RS32 (after Eogan 1986)
Current position: capstone with carvings on lower face
90°
Knowth West orthostat 16 (after Eogan 1986)
Current position: orthostat with carvings obscured by adjacent stone

**Robin's "hypothetical reconstruction" of orthostats within Site 1, Knowth**

The “initial position of reused stones” is indicated not by the type of symbols, which have nothing whatsoever to do with their original placement/orientation, but simply the fact that the stones have no carvings on their upper face, as currently positioned.  Case in point are Or. L 19 at Newgrange and Or. 74 within Knowth West.

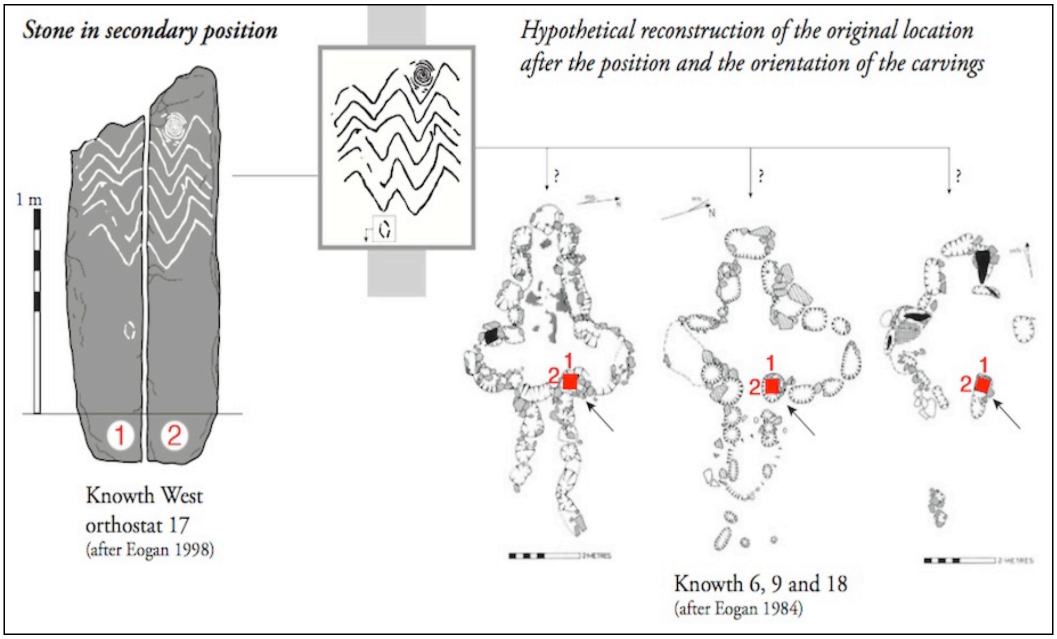


**Or. L 19, Newgrange**



**Or. 74, Knowth West**

**Robin’s Rule #3:** *“The layout of the carvings: certain reused stones present combinations of signs also occurring on stones in primary position where they are arranged according to precise rules... These rules, which define and impose a particular position and orientation to the signs combinations, bring determining help to the reconstruction of the initial position of reused stones.”*


Stone in secondary position
Hypothetical reconstruction of the original location after the position and the orientation of the carvings
1 m
1
2
Knowth West orthostat 17 (after Eogan 1998)
?
?
?
1
2
1
2
1
2
Knowth 6, 9 and 18 (after Eogan 1984)

**Robin’s “hypothetical reconstruction” of Or. 17, Site 1, Knowth West**

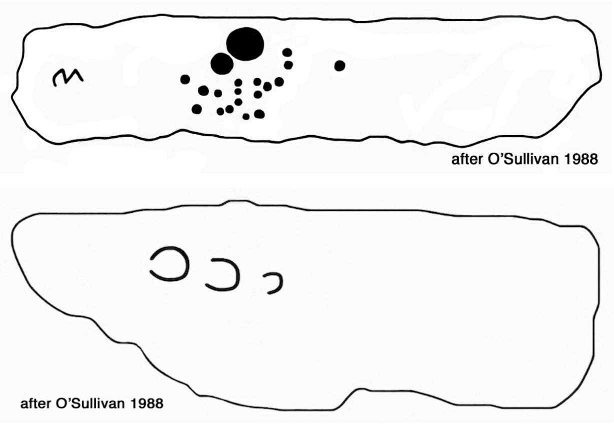
In the case of Or. 17, it's depicted as it existed prior to its reuse within the Western Passage of Site 1 at Knowth, though in its current location/orientation, is in violation of his 'threshold rule'. The break down the middle of the stone, indicates that it was likely broken up intentionally. An example of this is Corstown ME015-115, *"The boulder is split down the middle, with a number of stones wedged into the split. This may represent an attempt to break up the stone, and an elongated block appears to have been removed from the western sector of the upper surface of the boulder, possibly for use as a structural stone in a passage tomb."* (Twohig et al., 2010) *"Recent research suggests that many [carved stones] are associated with the fringes of uplands and with important paths of access between lower and higher ground. On occasion, they seem to line the route towards important monument complexes."* (GardWeb, 2002)

Bearing in mind the foregoing points, the vast majority of carved stones were either…

- … quarried, carved while in a recumbent position and then erected as standing stones along a path to the site or specific area within a site that the panel depicted. It should be noted that there are numerous standing stones in both Ireland and the UK, which are decorated with symbols similar to those found at Knowth and Newgrange.
- … quarried, erected as standing stones along a path to the site or specific area within a site and then carved.
- … carved while still recumbent in the landscape, and left in situ. In this case, it must be considered that the stones may have been partially covered with sod or lichen, just as many exist in the landscape today, and therefore only carved at one end.

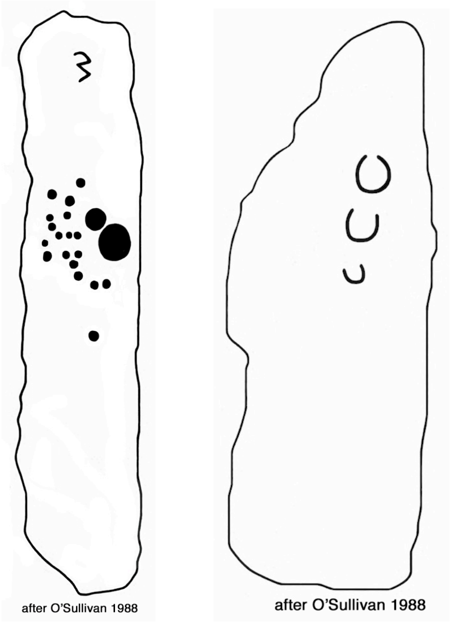
Upon the panels becoming obsolete, or the monuments they depicted having fallen into disuse, the stones were repurposed. Merely because a stone is decorated, does not mean that it has always served as an orthostat, kerbstone, sillstone, roofstone, lintel or corbel. Furthermore, simply because five (5) orthostats at Knowth are carved with chevrons and spirals, similar to those found on Or. C 16 at Barclodiad y Gawres, Wales, does not establish a 'law' or 'rule'. (see illustration, page 53) It should also be mentioned that the signs in Robin's foregoing illustration lack any consistency in their size and style, which one would expect to see, if in fact the symbols were intended to be kerb, threshold, axial and terminal motifs. Additionally, it must be considered that there are probably other orthostats and kerbstones, that like Or. 17, were broken up intentionally, which formerly were parts of a larger panel.

Reconstructing the orientation of stones based solely on the lack of carvings at one end is not limited to orthostats, but extends to kerbstones that likely served as standing stones, and later perhaps structural elements within a monument, such as K 1 & K 29 of Site 1.


after O'Sullivan 1988

after O'Sullivan 1988

**K 1 (T) & K 29 (B) in current position**

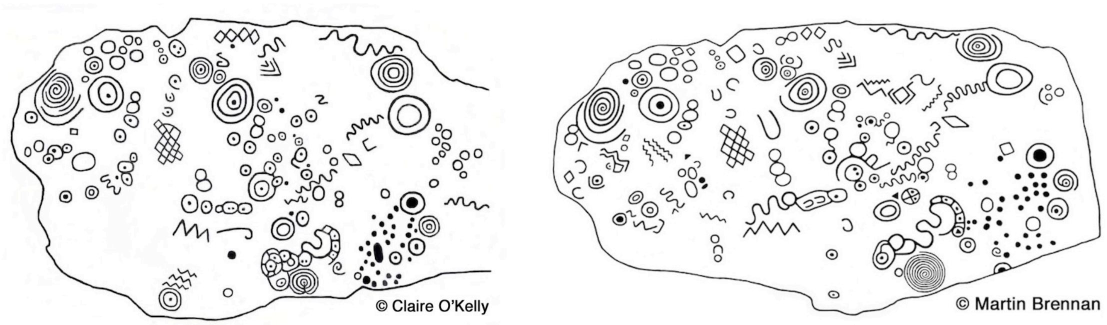

after O'Sullivan 1988

after O'Sullivan 1988

**K 1 & K 29 in initial position**

Beyond the foregoing, there are two issues Robin and other archaeologists have failed to take into account in their analyses of the symbols.

- Just as 'beauty is in the eye of the beholder', so too is what has been carved on the stones. Case in point, are two drawings on the rear of K 18 at Newgrange. While the drawings are similar, there are obvious discrepancies with not only what is depicted, but the spatial relationship of the symbols. (see drawings on following page)



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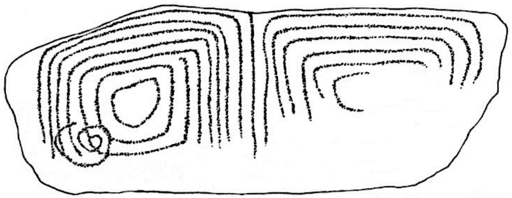
**Drawings of rear panel on K 18, Newgrange**

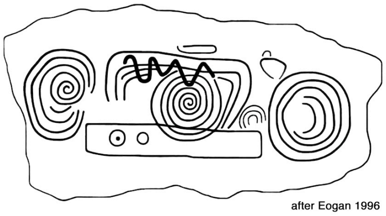
- Aside from many of the stones being repurposed, in numerous cases symbols are superimposed atop others, as on K 10 of Site 1 at Knowth. By knowing what the symbols depict, it's possible to 'reconstruct' at least three different phases of use.

As discussed in 'Petroglyphs: The Bend of the Boyne' (Section 2, pages 15 – 26) the 'arc' symbols on K 11 were part of a lunisolar array. So too were the 'arc' symbols on K 10, with the rectangle and two rings likely 'notations' made by the astronomers. In short, K 10 was possibly a 'forerunner' to K 11, and upon the 'astronomers' making new calculations, it became obsolete and was 'repurposed'.



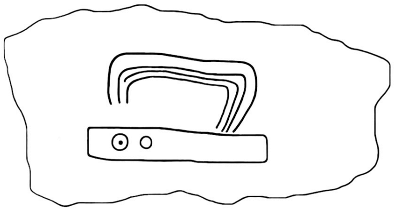
after Eogan 1990

**K 11, Site 1, Knowth**

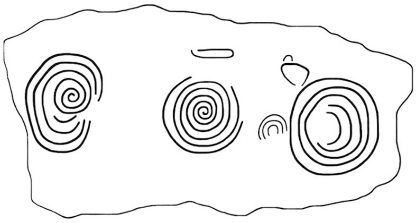


after Eogan 1996

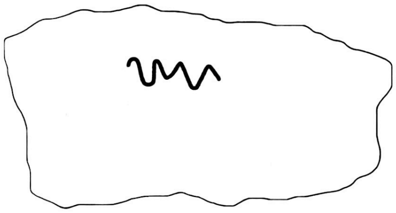
**K 10, Site 1, Knowth**



**Phase 1 of panel on K 10**



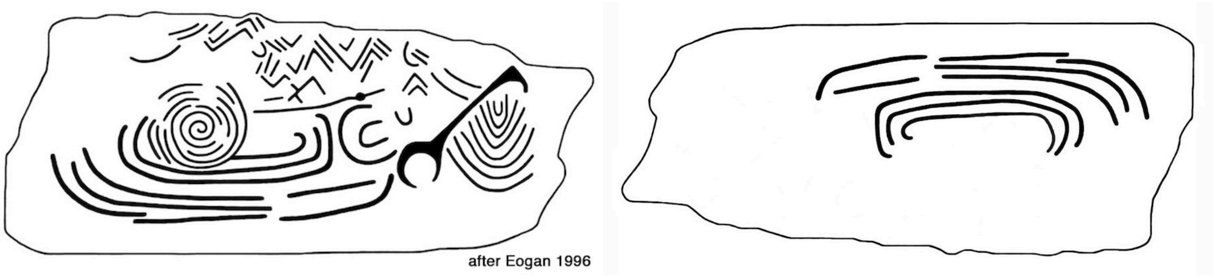
**Phase 2 of panel on K 10**



**Phase 3 of panel on K 10**

In the 2nd phase of use, the panel depicts several monuments of varying shapes and sizes. The 3rd phase of use depicts simply a stream or river, which likely means that panel was never completed, as the other symbols would have made it difficult to add additional symbols without further confusion, or quite possibly it was used as a practice stone by an artist's apprentice.

Interestingly, the panel on K 12 of Site 1 depicts 'arcs' similar to those on K 10 and K 11, along with numerous other symbols, which gets to not only the reuse of stones, but also their repurposing, *"and, therefore, the orientation of the art not what the artist intended."* (Moriarty, 2010) Determining the initial orientation of K 12 is not based on the symbols being similar to those on K 11 or K 74, but rather knowing what the symbols mean and the purpose of the panel.



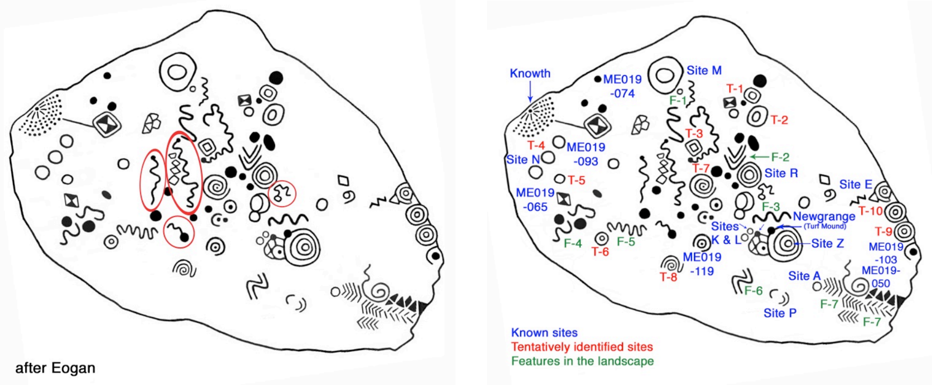
after Eogan 1996

**K 12, Site 1, Knowth**

*"Other schematic representations of living figures can be proposed from among the catalogue of Irish motifs. Several serpentiform motifs are represented with a cup, a circle, a V, a lozenge or a rectilinear angle at one end." "In Ireland and Brittany, the physical connection of the serpentiform motifs with the 'underworld', created by their placement close to the ground level and/or the mass of the tumulus, is probably related to the universal chthonian symbolism of the reptile. This observation supports the interpretation of the Irish serpentiforms (or at least a part of them) as schematic representations of snakes."* (Robin, 2012) Of the several examples Robin cites, one is the back panel on Or. 8, Site 14 at Knowth. His "observation" raises three points:

1) There's no evidence whatsoever that the Neolithic and Early Bronze Age inhabitants believed snakes were associated with the "underworld".
2) If in fact the symbols depict 'snakes', then what do the remaining symbols depict?
3) Though the rear panel on Or. 8 would have, in its current position, been in contact with the "mass of the tumulus", what Robin has failed to take into account is that the stone

was ‘reused’, and based on the fact that the panel depicts the Boyne, from Knowth east to Site E, the serpentiforms simply depict streams, with some leading to or from a pond.

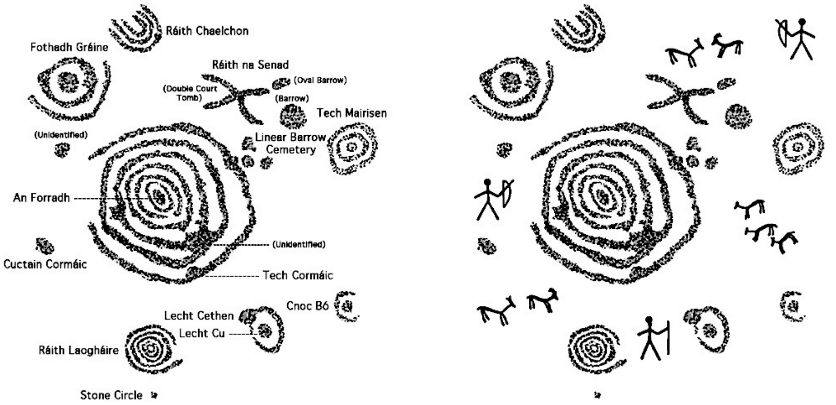


**Rear panel on Or. 8, Site 14, Knowth**

It’s quite obvious from the evidence at Knowth, with similar results at sites such as Newgrange, Dowth and Loughcrew, there is no ‘law of the signs’ or ‘grammatical rules’ governing the motifs, their location on the stones, nor their placement and orientation.

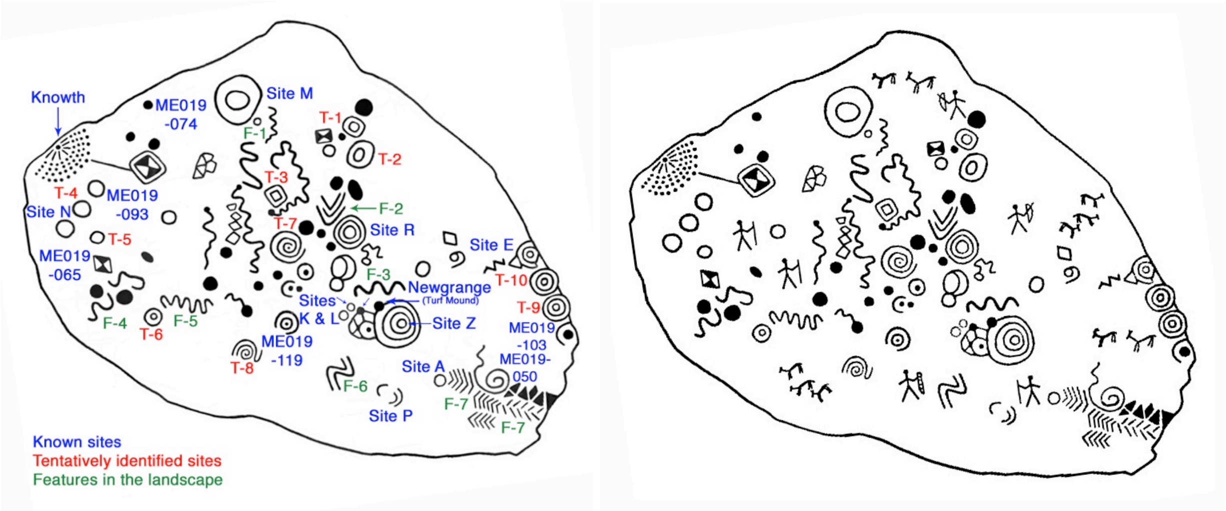
## Section 5: Anthropomorphic and Zoomorphic Figures

A map is defined as *“a diagrammatic representation of the earth's surface or part of it, showing the geographical distributions, positions, etc, of natural or artificial features”.* (Collins English Dictionary, 2009) In the overwhelming majority of cases, the artists who carved the ‘maps’ during the Neolithic and Early Bronze Ages in Ireland and the UK, chose not to depict natural features in the landscape which, coupled with the lack of anthropomorphic and zoomorphic figures, are the key factors for the panels not having been interpreted decades ago. Case in point is the panel found at the Hill of Tara, County Meath, Ireland, which depicts the earliest monuments constructed at the site. (see ‘Orthostat: The Mound of the Hostages’, pages 1 – 8)

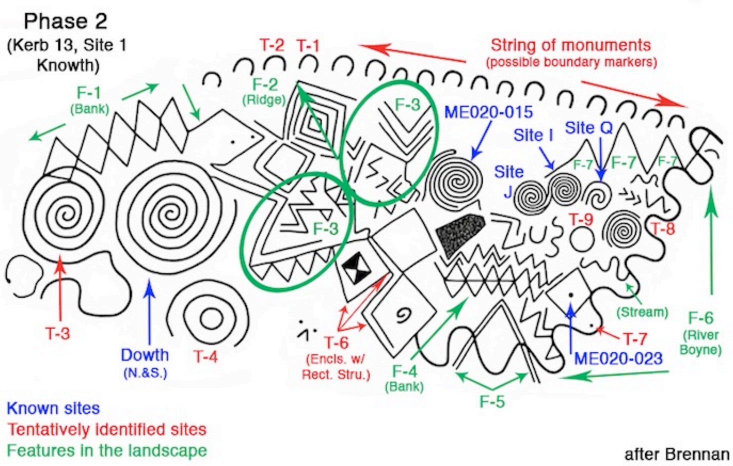


**Or. L.2, Mound of the Hostages, Tara, (L) & with figures added (R)**

In contrast to the aforementioned panel, is that found on Or. 8, Site 14 at Knowth, which depicts not only the site in its earlier years, but several features in the landscape. On the other hand, Kerbstone 13, Site 1 at Knowth takes depicting landscape features to another level, as it includes the River Boyne, a few streams and most interestingly, stylized depictions of entire banks, with the angular features depicting the stones forming those banks. As few panels include features in the landscape, it's likely this was not an artistic evolution in depicting sites, but rather one of 'artist's choice'.



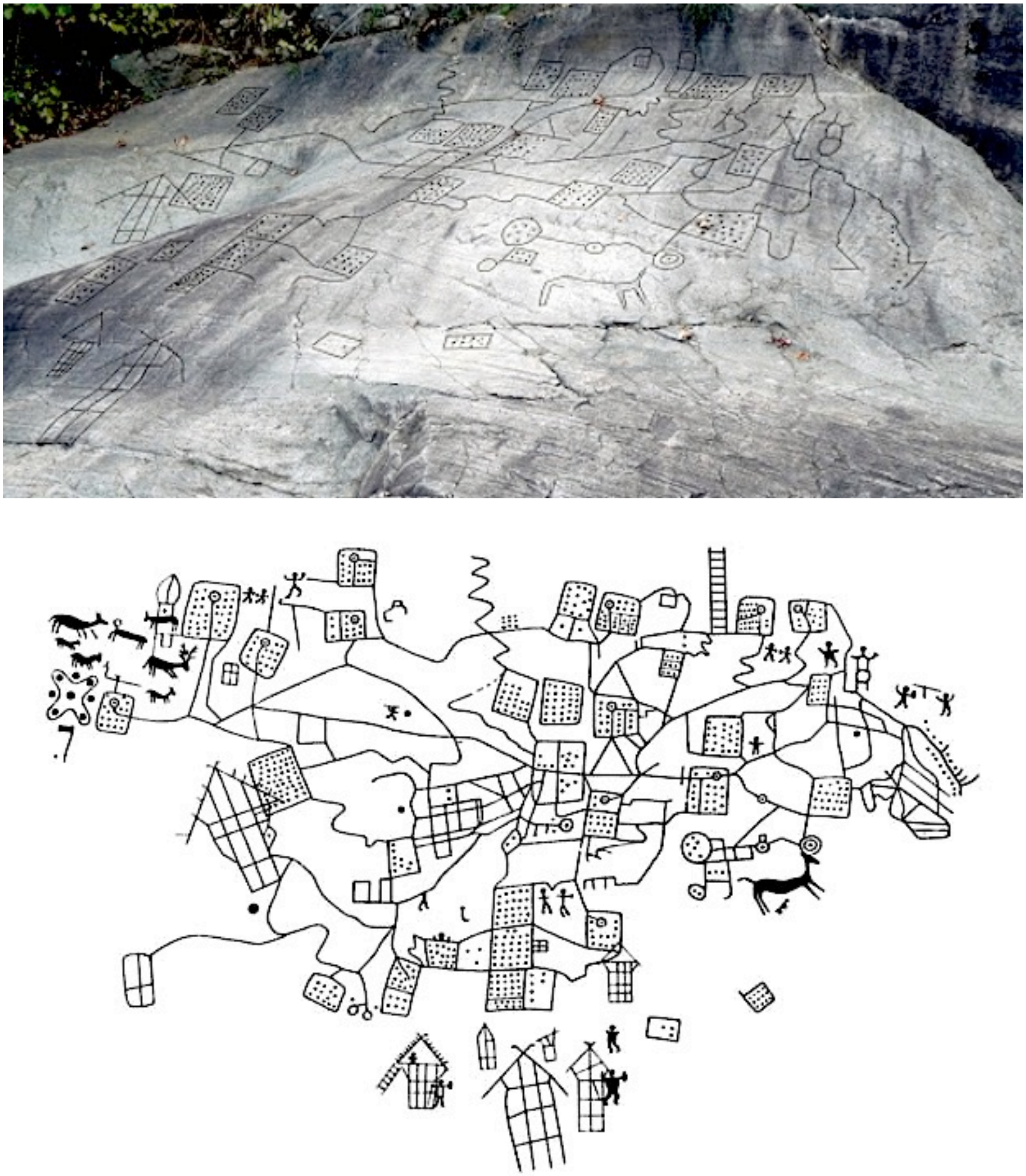
**Or. 8, Site 14, Knowth (left) & with figures added (R)**



after Brennan

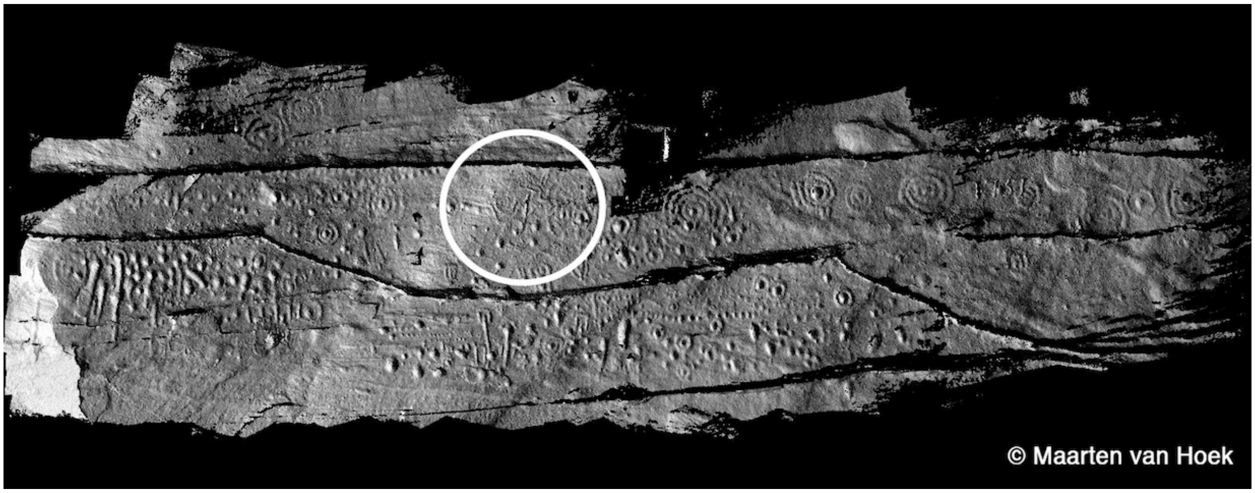
**K 13, Site 1, Knowth**

Perhaps one of the most obvious cases of a panel being a 'map', is one found in Valcamonica, Italy dubbed the 'Bedolina Map', which rather than depicting monuments and natural features in the landscape, it depicts houses, field systems, avenues, anthropomorphic and zoomorphic figures. Despite the obvious meaning of the motifs, there are those who've suggested a more fanciful interpretation, for which there is no supporting evidence. *"According to the new* *anthropological view, rock art is now seen as part of an ordered and sophisticated view of the sacred aspects of daily life. If villages and fields were depicted in it, they would have been associated less with the 'objective' recording of a spatial distribution for purposes of direction or reference than with invoking the favours of the controlling forces of those aspects of life these topographical features were used to represent or with attempts to appease them.”* (Delano Smith, 1982)

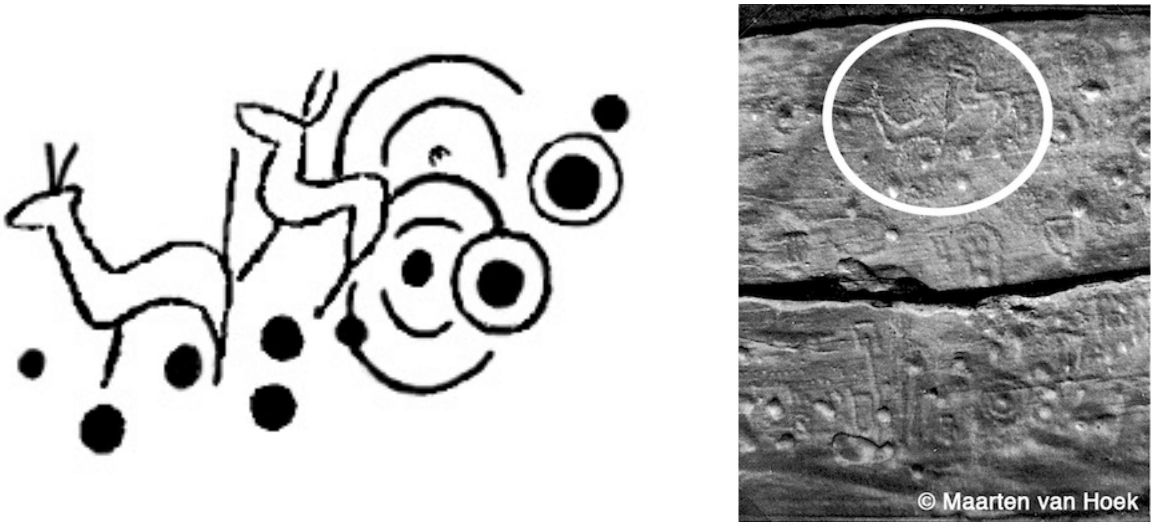


**Bedolina Map, Valcamonica, Italy**

In view of the interpretation of panels being ‘maps’ based on the presence of anthropomorphic and zoomorphic figures, it’s something of a mystery as to why the panel found at Ballochmyle Walls in East Ayrshire, Scotland has not been so interpreted, though this is likely due to the fact that out of the hundreds of symbols, consisting of cups and rings, there are no anthropomorphs and only two (2) zoomorphic figures. Had archaeologists recognized the panel as being a ‘map’ when it was first discovered in 1973, they likely would have realized that cups and rings depict mounds and ringed monuments.



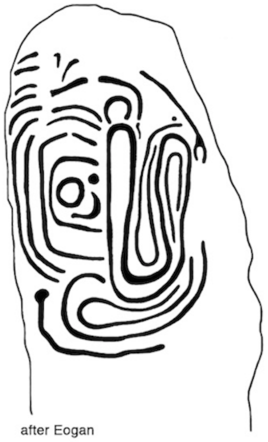
**Panel at Ballochmyle Walls, East Ayrshire, Scotland**



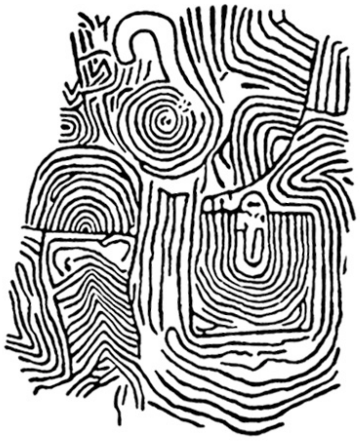
**Section of Ballochmyle Walls panel showing zoomorphic figures**

The definition of anthropomorphic is the *“attribution of human motivation, characteristics, or behavior to inanimate objects, animals, or natural phenomena.”* (American Heritage Dictionary, 2000) However, there are instances where archaeologists have interpreted symbols, and even entire panels, as being anthropomorphic, despite the fact that they exhibit no human qualities.

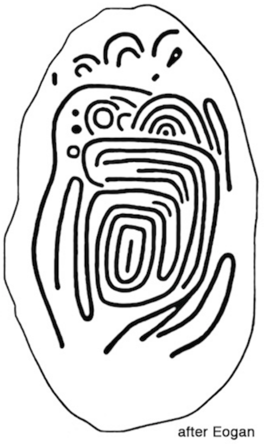
Case in point, are Or. 69 within the Eastern Passage and Or. 49 within the Western Passage of Site 1 at Knowth, that were purportedly ‘imported’ from Brittany and Iberia, and intentionally positioned at strategic points within the passages, (O’Sullivan 1986; 1996) for which there is absolutely no evidence. While the aforementioned panels are of a somewhat similar style, one cannot compare them, as they were carved by an entirely different culture, likely centuries apart.



**Or. 69, Knowth East**



**Or. L 5, Gavrinis**



**Or. 49, Knowth West**

## The Sites

It should be noted that the orientation of the monuments depicted on the panels found at the following sites, may vary from the aerial images, which is due to one or more of the following:

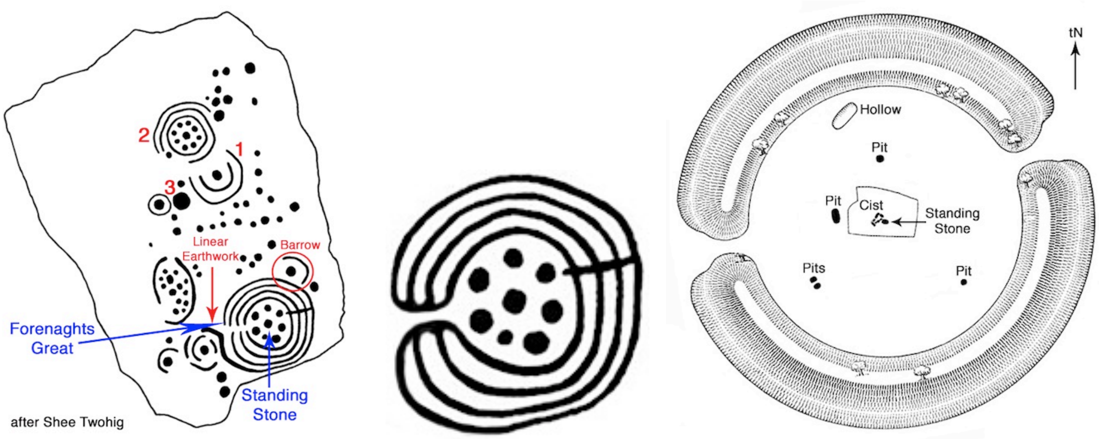
- The geographical area depicted on the panels.
- The carvings were done over a significant period of time, by various artists. The use of *“conventional plan and section drawings”* is *“a time consuming, highly subjective method that has a low level of accuracy and a high level of error.”* (Brady & Gibson, 2005)
- The size and orientation of additional symbols, may have been dictated by those carved decades earlier.
- ‘Cheating’ of the symbols that depict the monuments and features in the landscape, which may be located further afield than depicted, i.e., compressed space.
- The limited surface area on which to carve the monuments.
- The shape, contours and flaws of the stone.

(Note: interpretation of the images is solely the work of this author.)

# Ireland

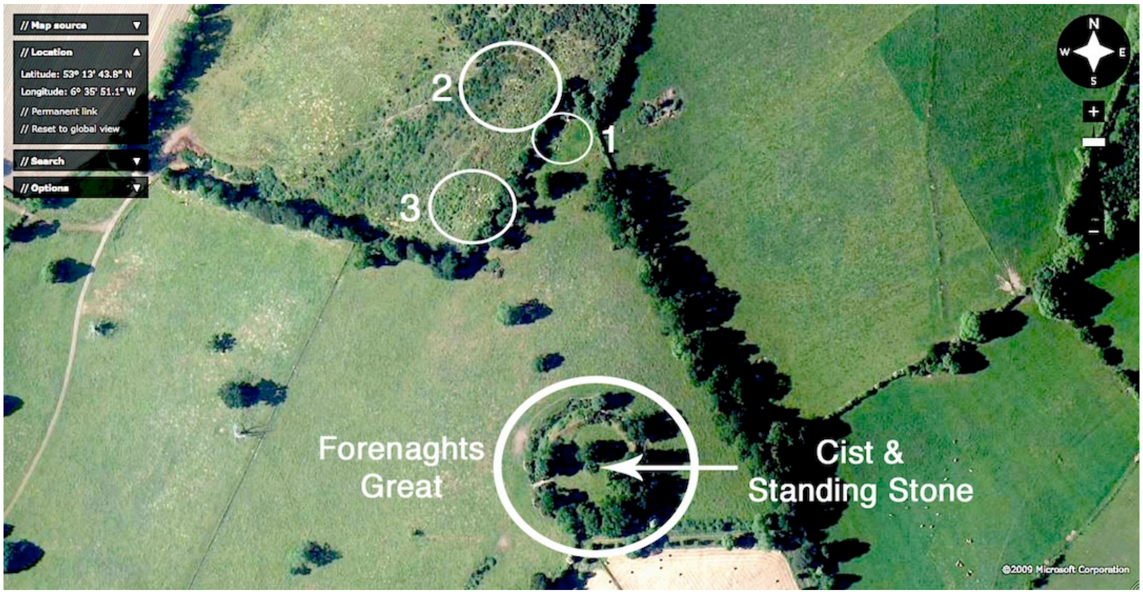
## Section 6: Forenaghts Great, County Kildare

Of the two recorded monuments within the site, the most significant is a henge, measuring 63m diameter. However, based on a panel found 650m SSW of Forenaghts, there were originally six smaller enclosures and numerous cairns. As seen on the panel, the motif depicting the henge lacks a gap in the NE, suggesting the enclosure initially had a single opening in the west. When the gap was added, it would have been impossible to alter the symbol to reflect that, so a line was simply added. As the bank measures 6 – 8m in width, and that an outer fosse with traces of a second outer bank were noted, Forenaghts began as a multivallated enclosure, with the fosses between its inner banks later infilled. This is further indicated by the fact the concentric semi-circles are not closed at the ends, as seen in the example below.



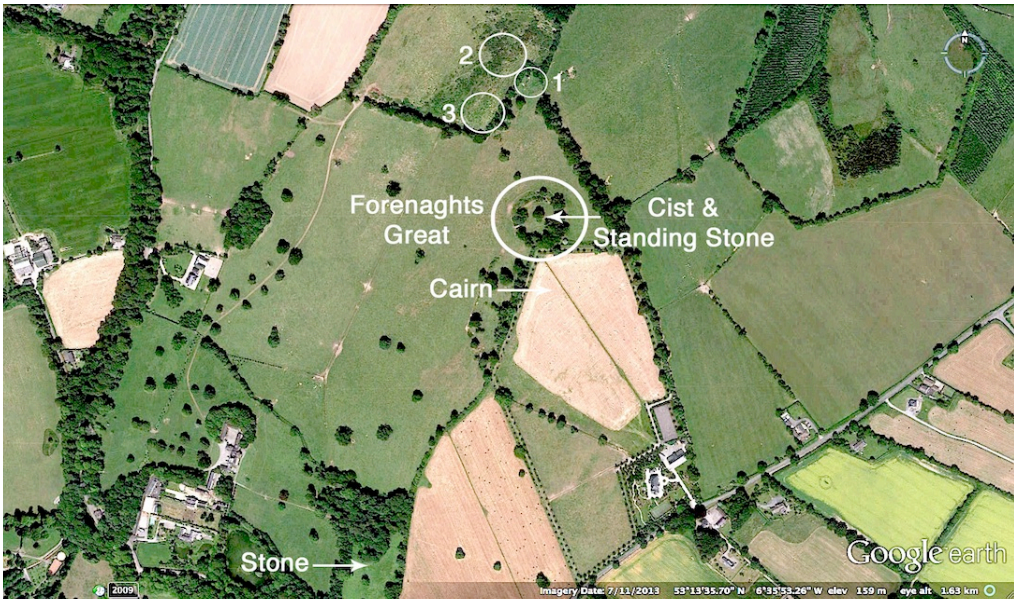
after Shee Twohig

Panel (L), Example (C) & Plan (R)



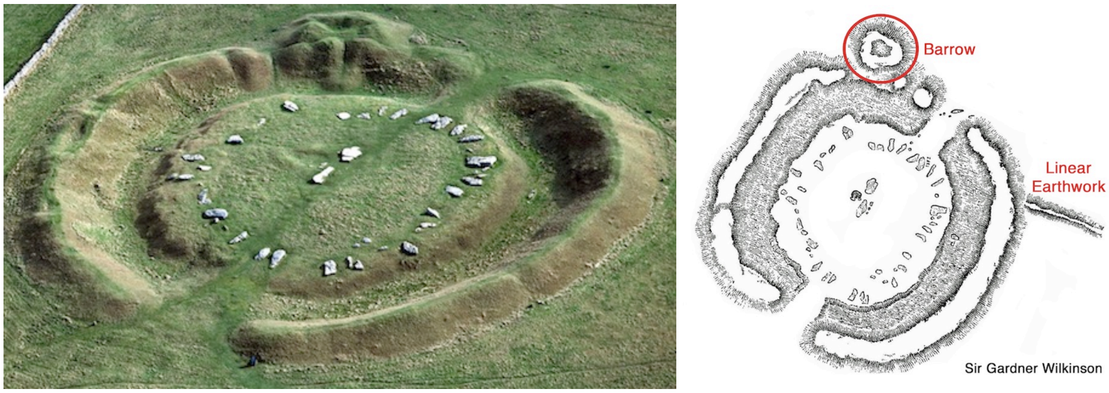
Latitude: 53° 13' 43.8" N
Longitude: 6° 35' 51.1" W

Aerial of Forenaghts


2
1
3
Forenaghts Great
Cist & Standing Stone
Cairn
Stone
Google earth
2009
Imagery Date: 7/11/2013 53°13'35.70" N 6°35'53.26" W elev 159 m eye alt 1.63 km

**Aerial of Forenaghts**

As noted on the plan of Forenaghts, there were three (3) outer pits found during excavation. Based on the panel, there are an additional four (4) located on the inner perimeter of the bank. The outer cups may depict a stone circle, similar to that within Arbor Law, with the cist, which is not depicted, added at a later date. The symbol labeled #2, was a smaller banked enclosure, possibly surrounding a second stone circle. Also note the barrow and linear earthwork on the plan of Arbor Law, as compared to the symbol depicting Forenaghts.



Sir Gardner Wilkinson

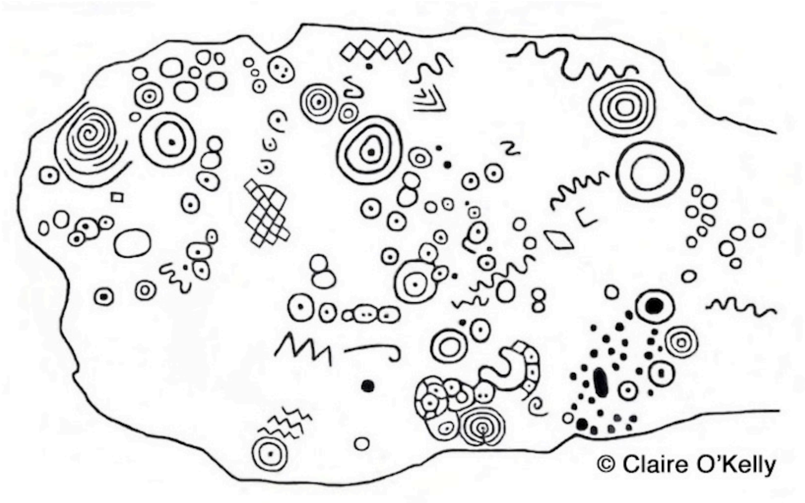
**Aerial & Plan of Arbor Low, Derbyshire, England**

## Section 7: Townley Hall, County Louth

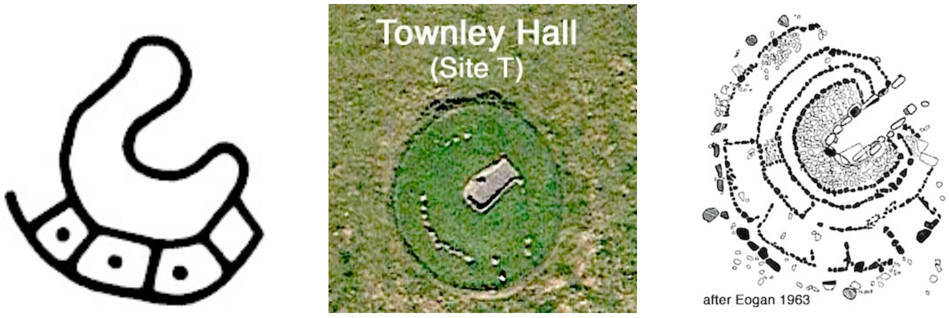
One key to matching panels to the sites they depict, is by comparing unique symbols to equally unique monuments and features in the landscape. Such is the case of a symbol on the rear panel of K 18 at Newgrange, depicting Townley Hall, which is located 3.3km NNE of Newgrange. So why would a panel that depicts Townley Hall and surrounding monuments, end up as a kerbstone at Newgrange? There are two possibilities. First, that the panel had become obsolete. Secondly, Townley Hall and many of the surrounding monuments may have fallen into disuse by the time Newgrange was constructed. If the latter, that would indicate the passage mound at Townley Hall and other monuments represented on the panel, predate at least the main mound at Newgrange by perhaps several hundred years. In either case, the stone was simply repurposed as a kerbstone.

It should be noted that the geographical area represented on the panel, encompasses roughly 11.44 sq. km. (4.4km SW/NE x 2.6km NW/SE) and was 'mapped' without the aid of any modern devices, which accounts for some of the symbols not being oriented precisely. In view of the fact that the symbols cover the entire stone, it originally would have been in a recumbent position along a path leading to the site, though where that may have been would be impossible to determine.

(Note: six (6) of the monuments matching the symbols have been recorded, i.e., Townley Hall, the Structures, Site Q and Enclosures #1 – #3)

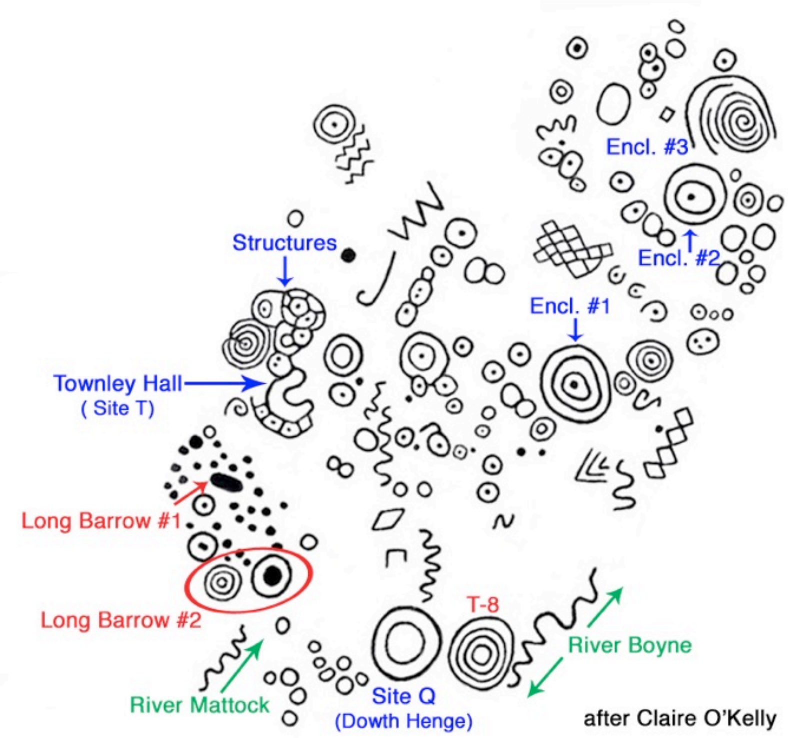


**Rear panel on K 18, Newgrange**

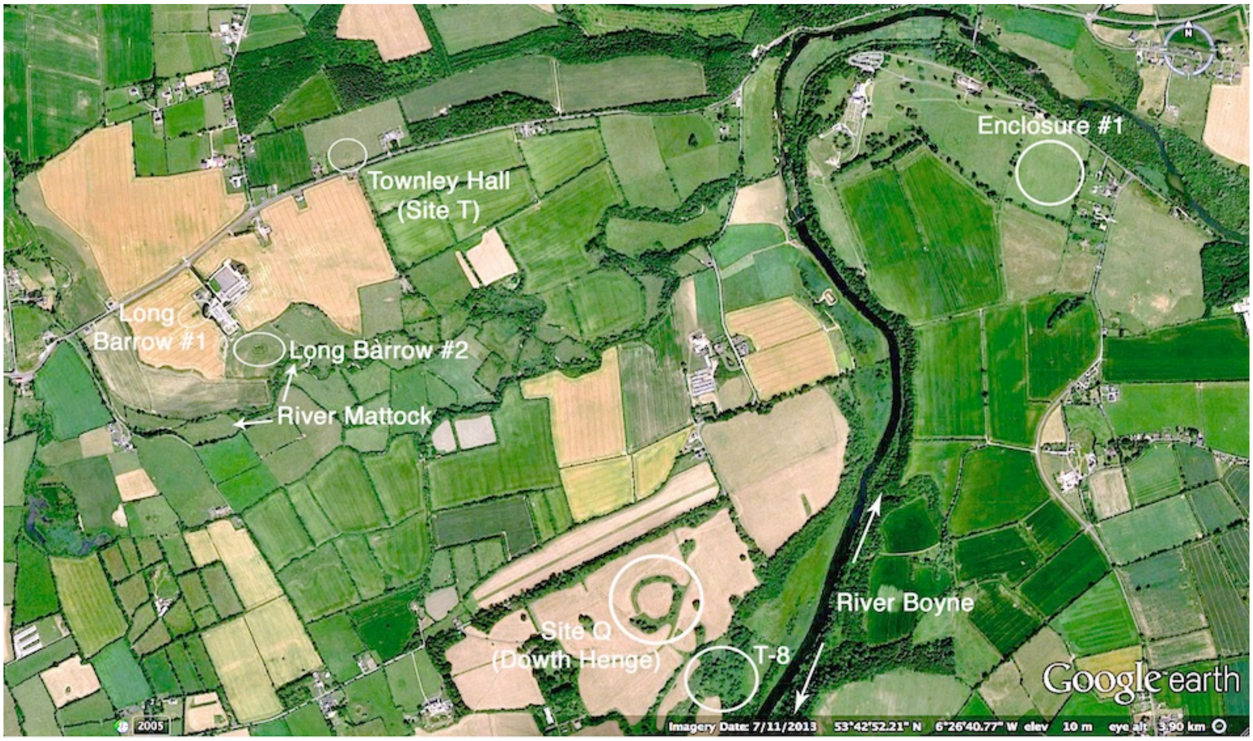


**Insert of Townley Hall from panel (L), Aerial of Townley Hall (C) & Plan (R)**

The most striking 'component' of the symbol depicting Townley Hall, are its outer segments. Though the symbol only depicts four (4), while the plan consists of five (5), the difference is probably due to the 5th segment never having been added to the panel.

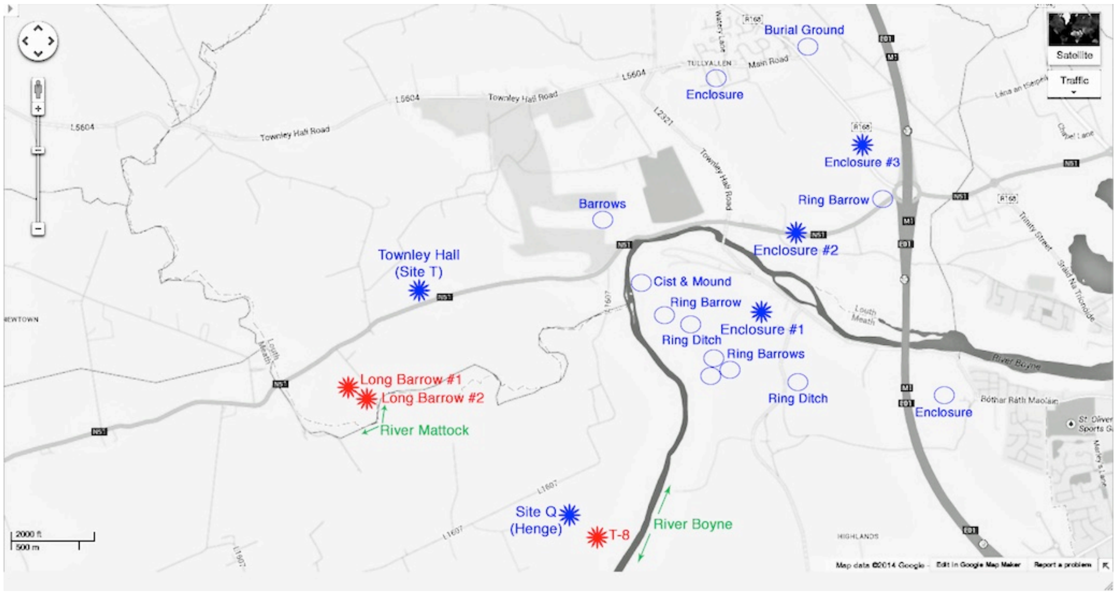


**Rear panel on K 18, Newgrange**

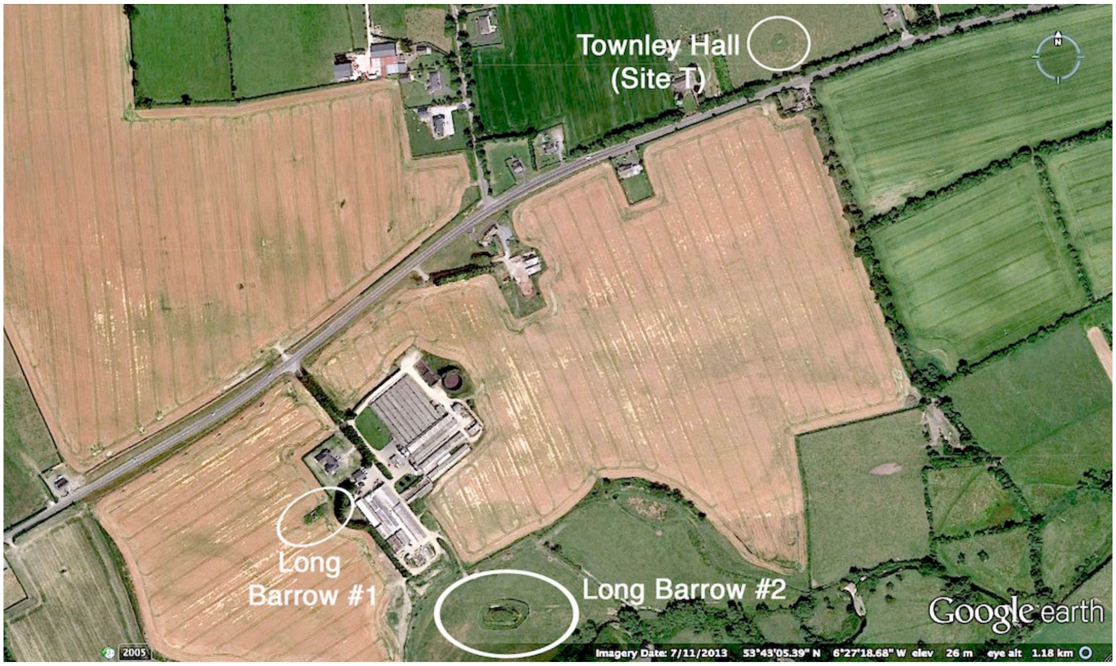


**Aerial of monuments depicted on rear panel of K 18, Newgrange**

With respect to the symbols on the panel immediately adjacent to Townley Hall, labeled ‘Structures’, *“Beneath the megalithic tomb excavated by G. Eogan in 1960 was a layer of occupation refuse in association with numerous stake-holes and hearths. This suggested to the excavator that occupation on the site was of a recurrent semi-permanent nature and that the structures revealed were probably of a tent or hut-like nature.”* (JRSAI 1963, 37 – 81) This indicates that the U-shaped symbol merely depicts the passage and chamber, with a capping mound added atop the structures at a later date.

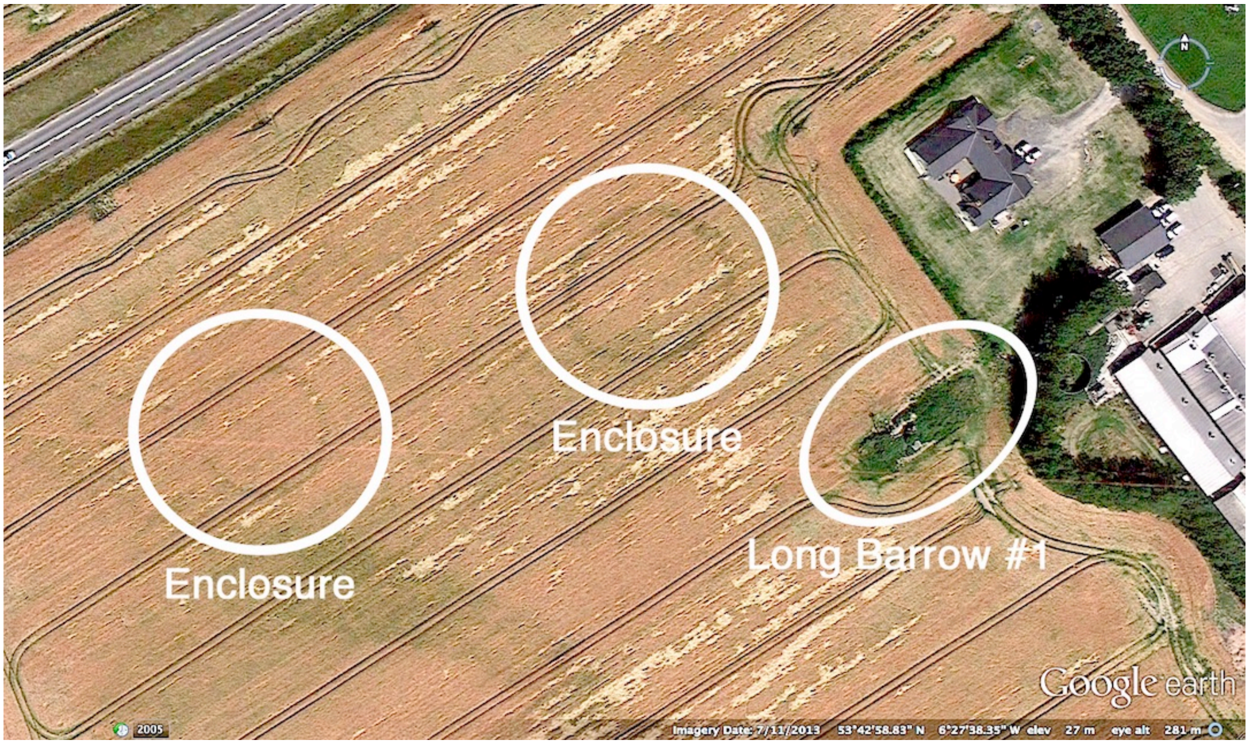


**Map of site depicted on panel**


Townley Hall (Site T)
Long Barrow #1
Long Barrow #2
Google earth
2005
Imagery Date: 7/11/2013 53°43'05.39" N 6°27'18.68" W elev 26 m eye alt 1.18 km

**Aerial of Townley Hall & Long Barrows #1 & #2**

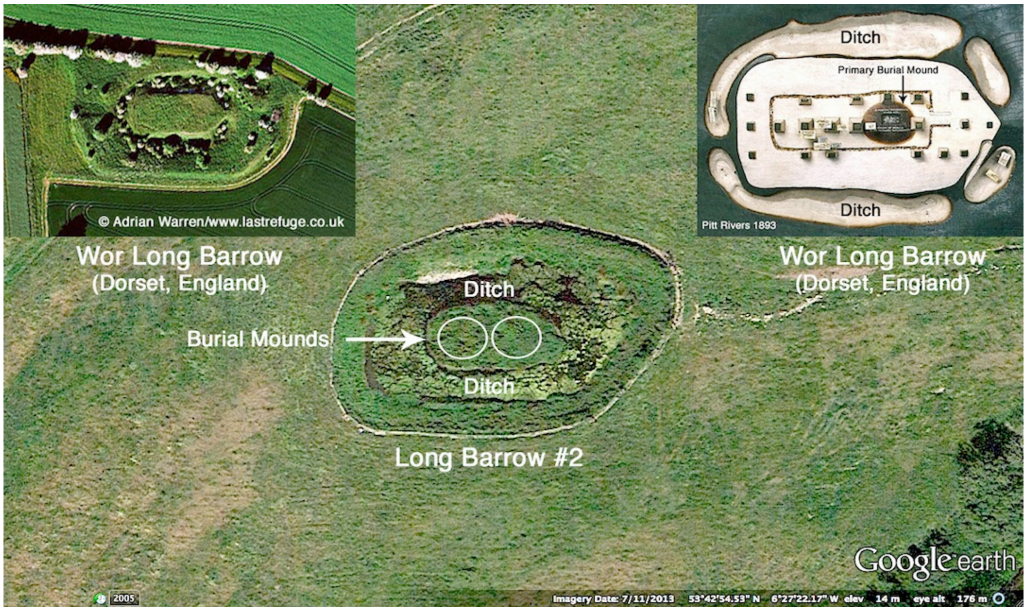
Regarding the monument labeled Long Barrow #1, there is the possibility that it's simply a landscape feature, which due to its size, (34.5m x 11m) the artist may have felt compelled to include on the 'map'. However, in view of the surrounding cup and ring motifs depicting mounds and ring barrows, that seems unlikely.


Enclosure
Enclosure
Long Barrow #1
Google earth
2005
Imagery Date: 7/11/2013 53°42'58.83" N 6°27'38.35" W elev 27 m eye alt 281 m

**Aerial of Long Barrow #1 & Enclosures**

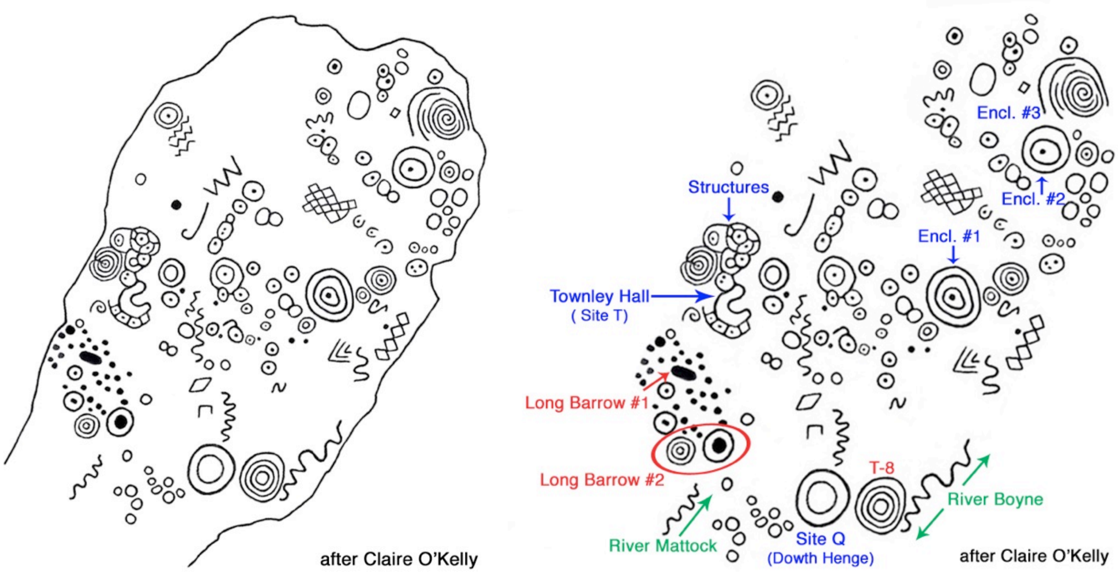
As seen in the aerial image above, there are two recorded cropmarks adjacent to Long Barrow #1, though they don't appear to be depicted on the panel. However, given the fact that there are ring barrows in the area depicted on the panel, as seen on the map of the entire site, and that monuments are known in many cases to have been 'remodeled' over time, there is the distinct probability that the cropmarks are not the remains of enclosures, but those of ring barrows, with the rings added at a later date to two of the mounds depicted on the panel adjacent to Long Barrow #1.

Two of the symbols on the left side of the panel, labeled Long Barrow #2, represent monuments that were incorporated into what is most likely a long barrow, (outside dimensions: 65.5m x 38m, with the mound measuring 25.5m x 12m) similar to the Wor Long Barrow in Dorset, England. As there are many cases of long barrows incorporating one or more barrows, this would not be unusual. (see image on following page)

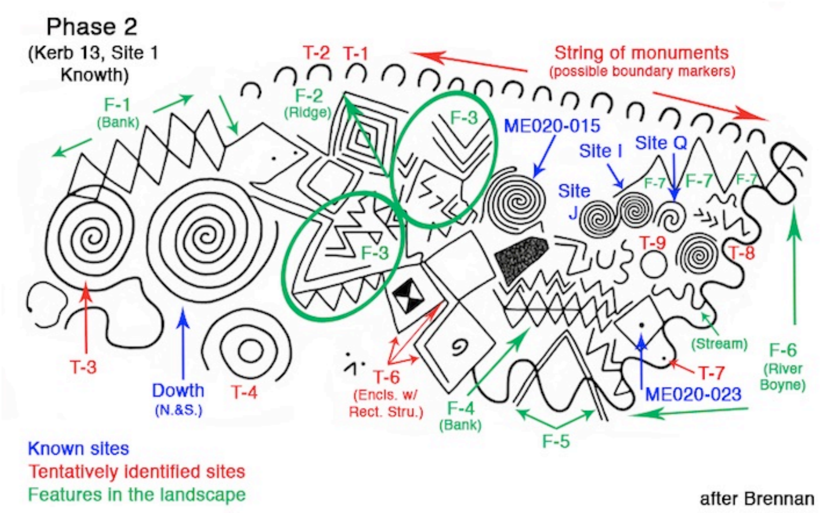


**Aerial of Long Barrow #2**

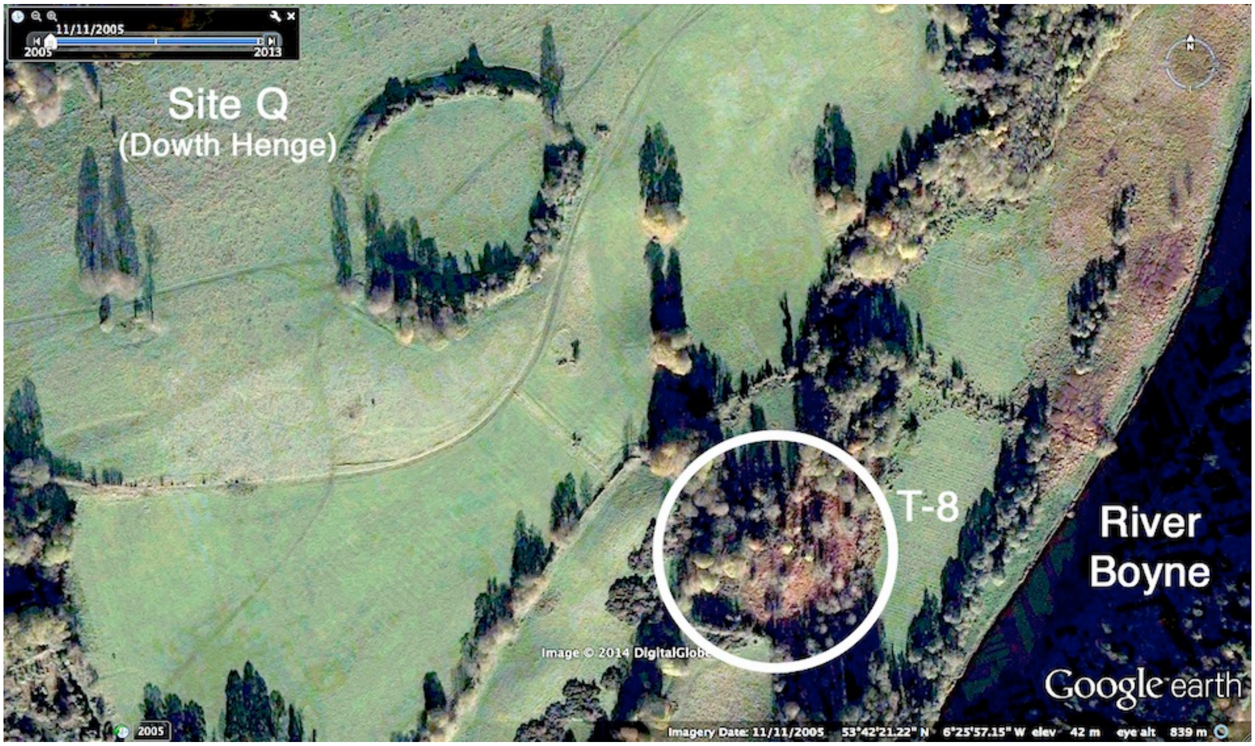
As for the symbol labeled T-8 on the panel, it's incorrectly oriented to what appears in the landscape, as opposed to where it's properly depicted on K 13 of Site 1 at Knowth. (Note: T-8 measures roughly 150m N/S & 175m E/W in diameter.) This gets back to the issue of the shape and size of the stone, as well as other symbols, dictating the location of monuments depicted at a later date. It should be noted that T-8 is depicted on the rear panel of K 18 as concentric rings, whereas on K 13 of Dowth it's depicted as a spiral. This likely indicates T-8 evolved from a ringed enclosure to a large mound, much like Newgrange evolved. (see drawings below & top of page 71) (also see Section 16 of 'Petroglyphs: The Bend of the Boyne')



**Rear panel on K 18, Newgrange**



**Panel on K 13, Site 1, Knowth**


11/11/2005
2005
2013
Site Q
(Dowth Henge)
T-8
River
Boyne
Image © 2014 DigitalGlobe
Google earth
2005
Imagery Date: 11/11/2005 53°42'21.22" N 6°25'57.15" W elev 42 m eye alt 839 m

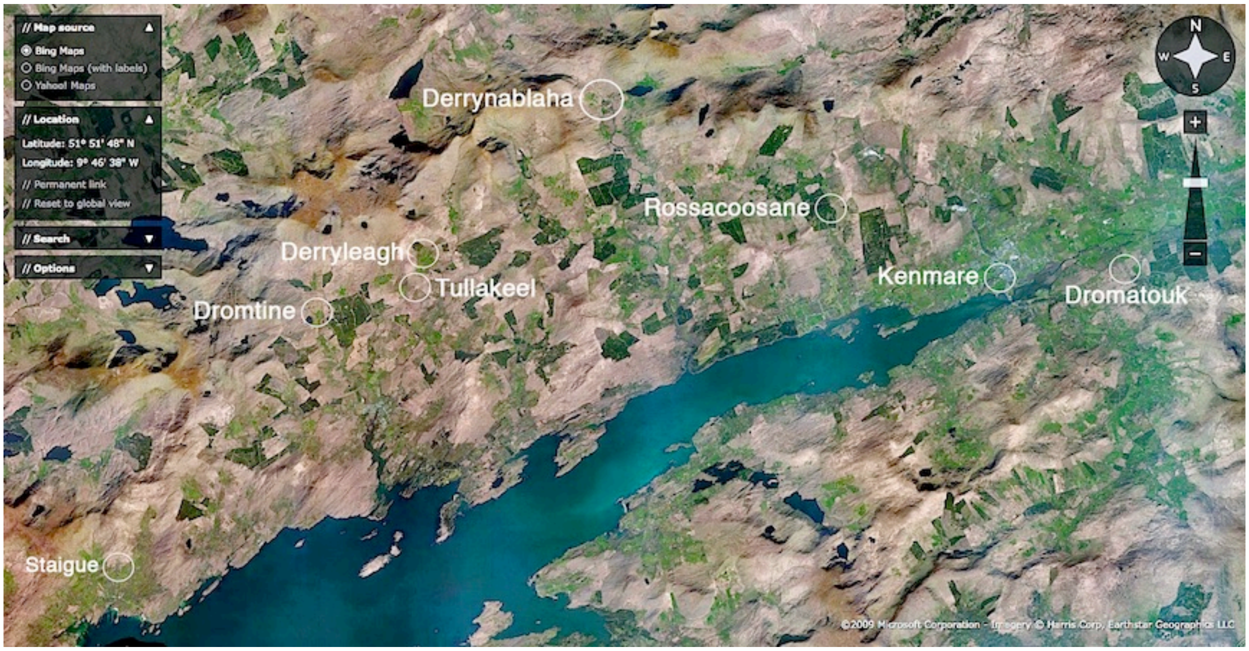
**Aerial of Sites Q & T-8**

Lastly, with regards to Enclosure #1 northeast of Site Q, it’s described in the 'Archaeological Inventory of County Meath' (Dublin: Stationery Office, 1987) as being roughly 50m in diameter, this based on an aerial photo (ACAP, 912). As seen on the panel, the enclosure is equal in size to that of Site Q, however, the henge is substantially larger, roughly 170m NW/SE & 178m SW/NE. The most likely explanation is that the aerial photo only recorded one of the two inner rings of the enclosure.

## Section 8: The 'Tullakeel Complex', Iveragh Peninsula, County Kerry

The 'Archaeological Ensemble of the Bend of the Boyne', the core area of which comprises approximately 780 hectares, (7.8km²) with a buffer zone of approximately 2,500 hectares, (25km²) is one of the worlds most significant Neolithic complexes, especially with respect to its wealth of petroglyphs, which constitute the largest collection of rock art in Europe. However, based on the numerous panels of art, and countless monuments on the Iveragh Peninsula, County Kerry, Ireland, the Boyne Ensemble pales in comparison to the 'Tullakeel Complex' which covers approximately 112.5km² (3km x 37.5km) and potentially triple that size. It should be noted that the area is not formally named the 'Tullakeel Complex', rather that due to the panel at Tullakeel having been the key to locating other monuments within the site, the name seemed appropriate.

While the 'Boyne Ensemble' consists of numerous mounds and circular enclosures of varying sizes, the 'Tullakeel Complex' appears to consist entirely of small ring cairns, ranging in size from 3m to 12m in diameter. Not including areas now covered by vegetation and modern housing, there are at least 60 distinct sites, with potentially two to three times that, containing any where from one to a dozen or more ring cairns. Each of the areas covers approximately 380m x 200m (.08 km²).

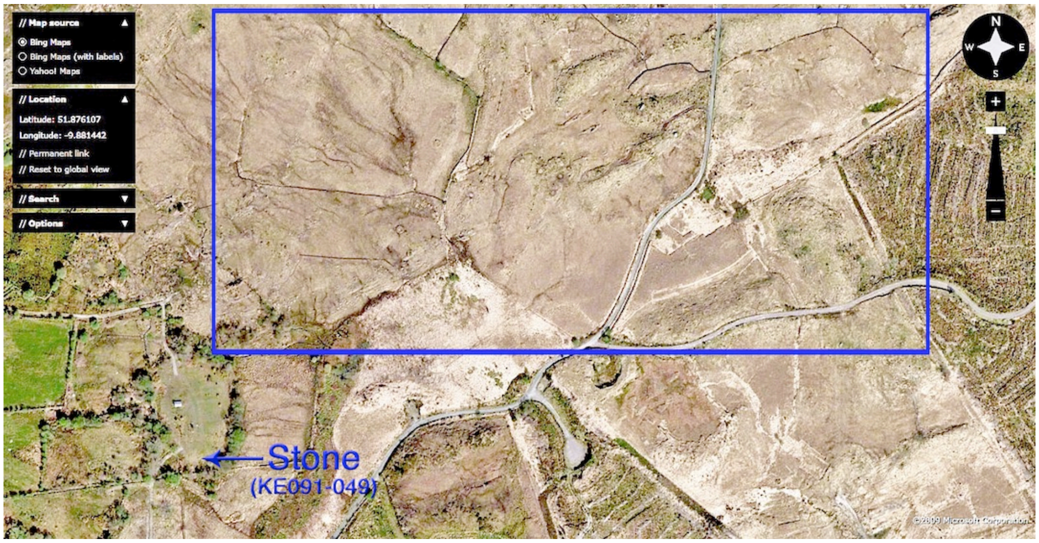


// Map source
● Bing Maps
○ Bing Maps (with labels)
○ Yahoo! Maps

// Location
Latitude: 51° 51' 48" N
Longitude: 9° 46' 38" W

Aerial of the 'Tullakeel Complex'

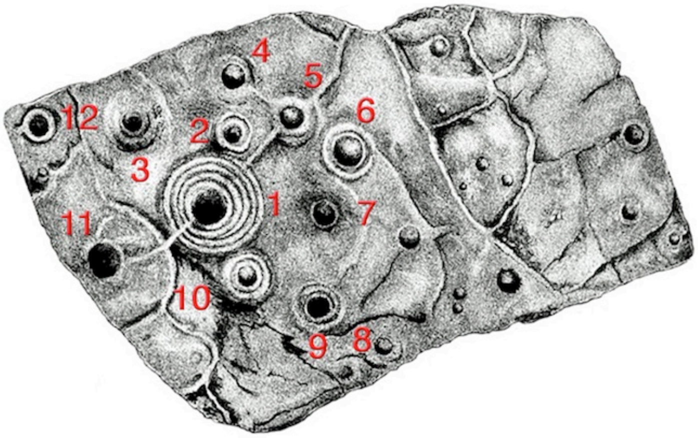
# Tullakeel



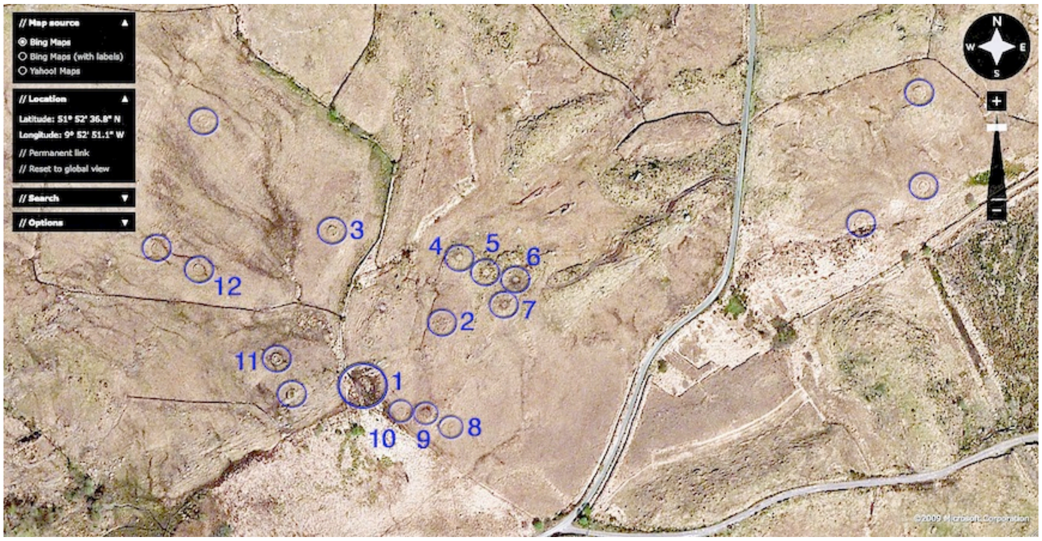
◉ Bing Maps

Latitude: 51.876107
Longitude: -9.881442

Aerial of Tullakeel



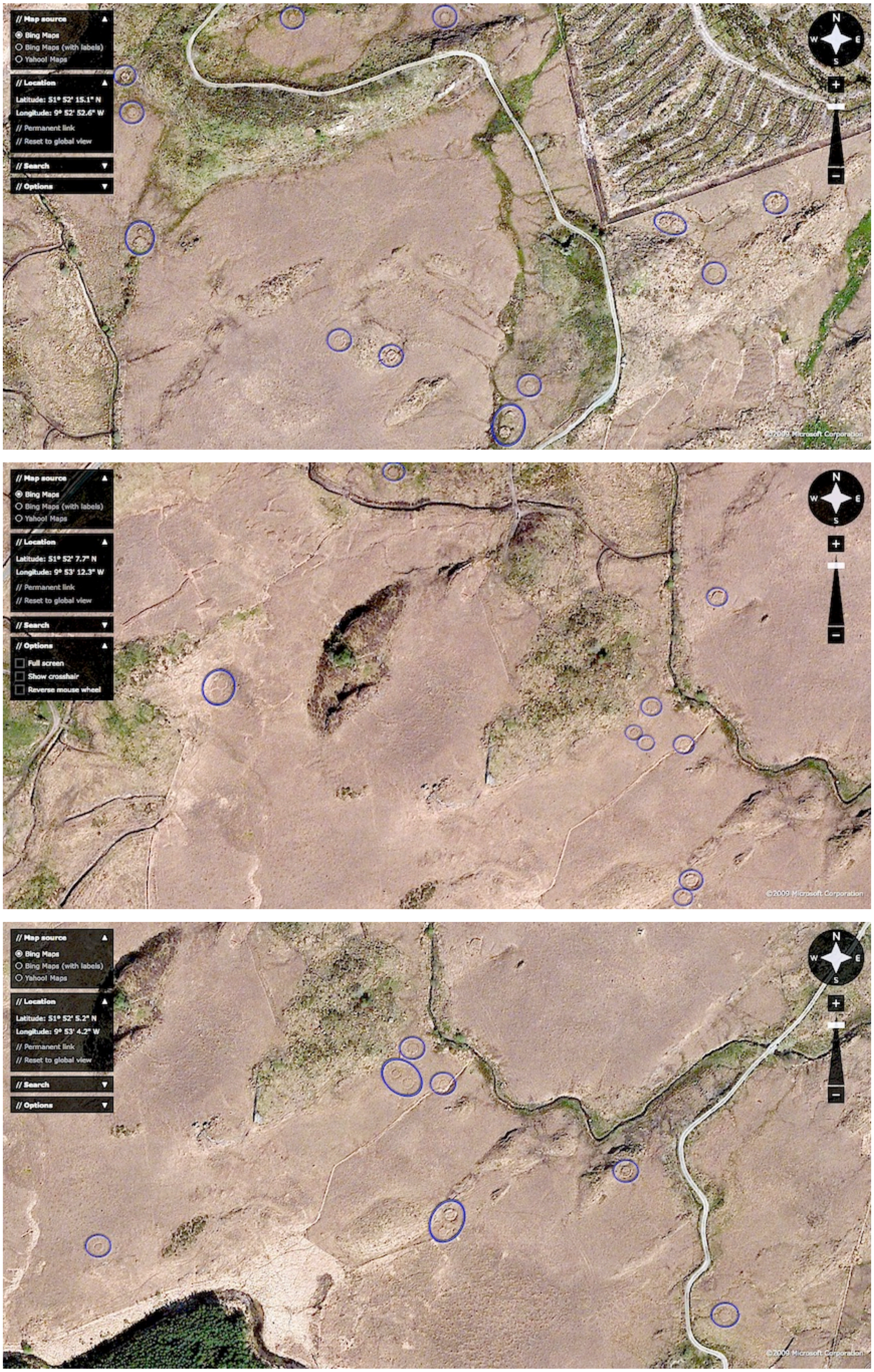
Tullakeel panel



◉ Bing Maps

Latitude: 51° 52' 36.8" N
Longitude: 9° 52' 51.1" W

Aerial of area depicted on Tullakeel panel



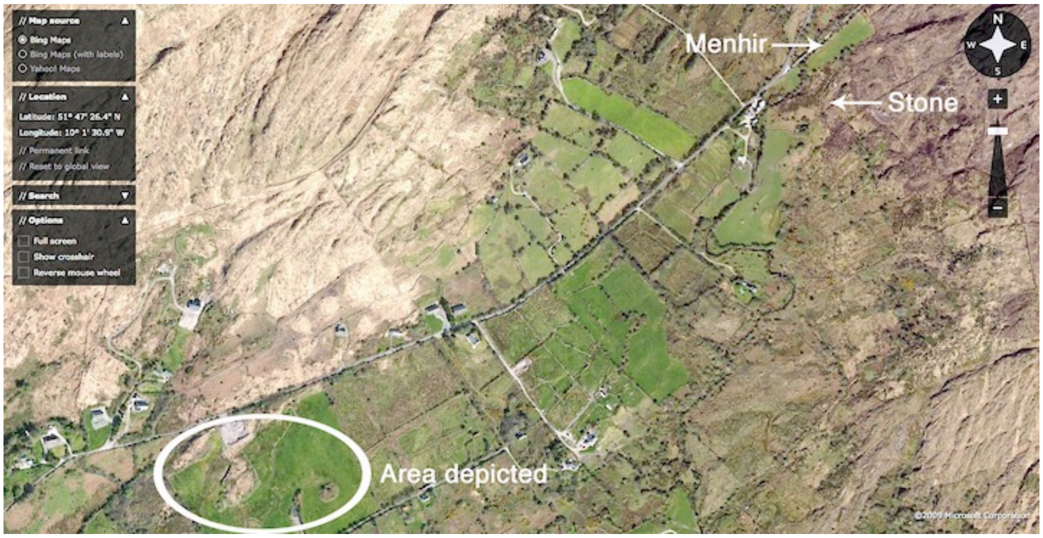
● Bing Maps
Latitude: 51° 52' 15.1" N
Longitude: 9° 52' 52.6" W

● Bing Maps
Latitude: 51° 52' 7.7" N
Longitude: 9° 53' 12.3" W
☐ Full screen
☐ Show crosshair
☐ Reverse mouse wheel

● Bing Maps
Latitude: 51° 52' 5.2" N
Longitude: 9° 53' 4.2" W

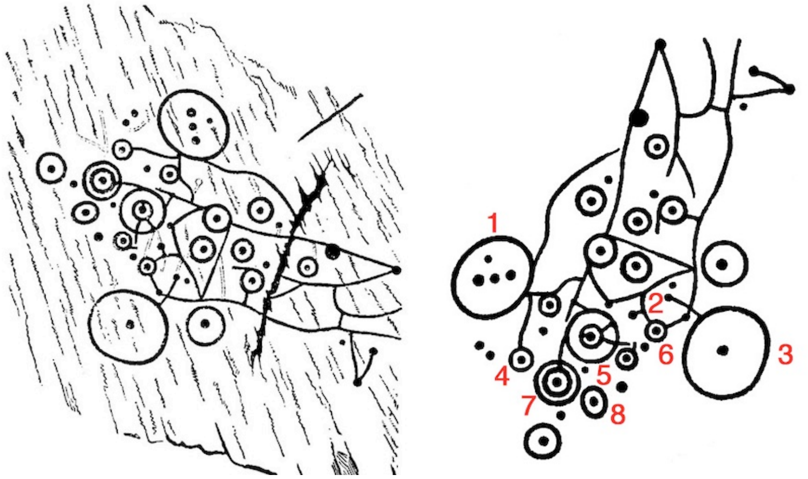
**Aerials of areas southeast and southwest of Tullakeel panel**

## Staigue

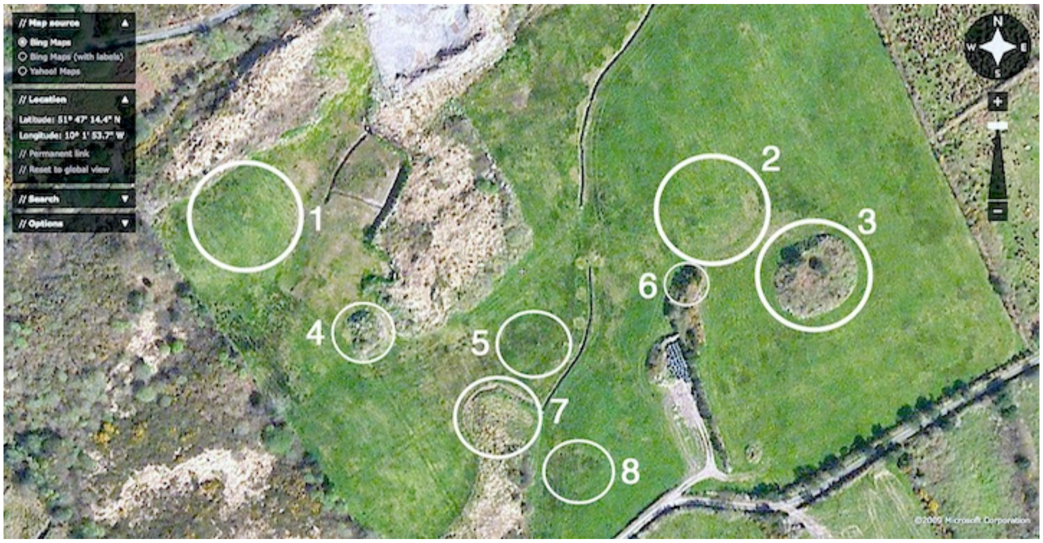


Latitude: 51° 47' 26.4" N
Longitude: 10° 1' 30.9" W

Aerial of Staigue



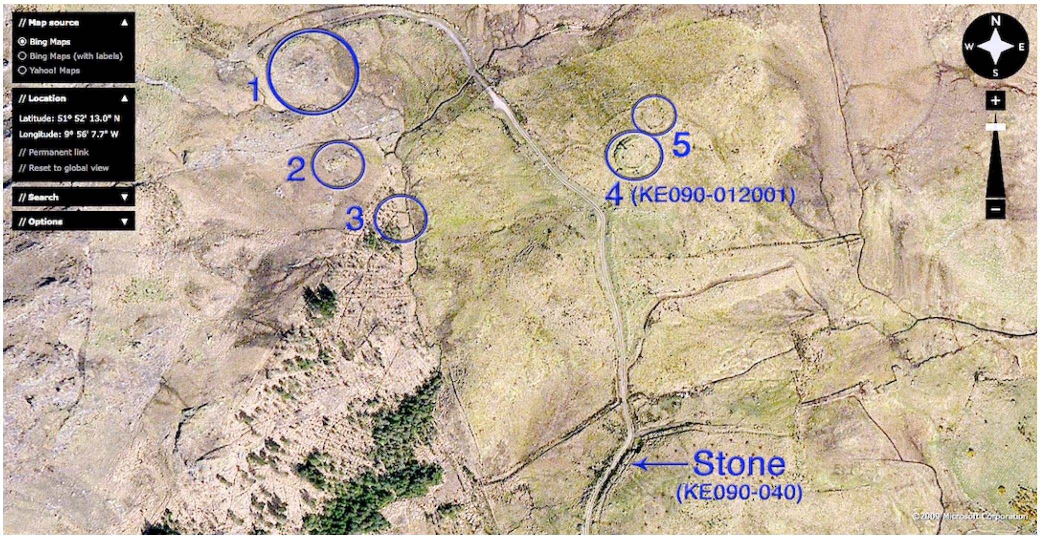
Staigue panel



Latitude: 51° 47' 14.4" N
Longitude: 10° 1' 53.7" W

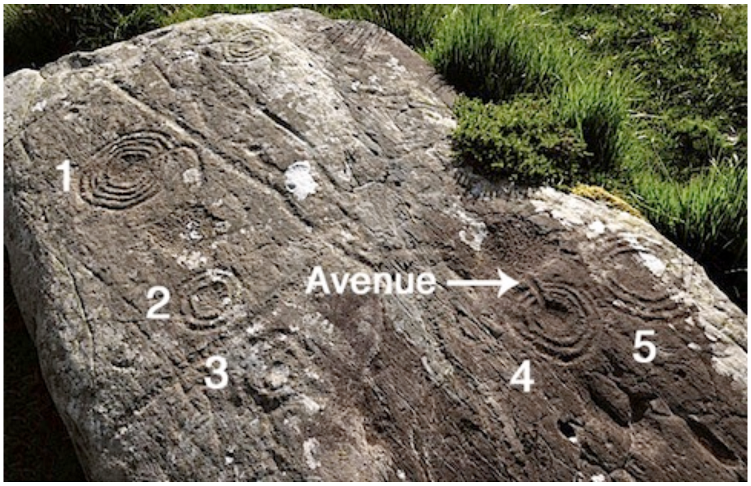
Aerial of area depicted on Staigue panel

# Dromtine

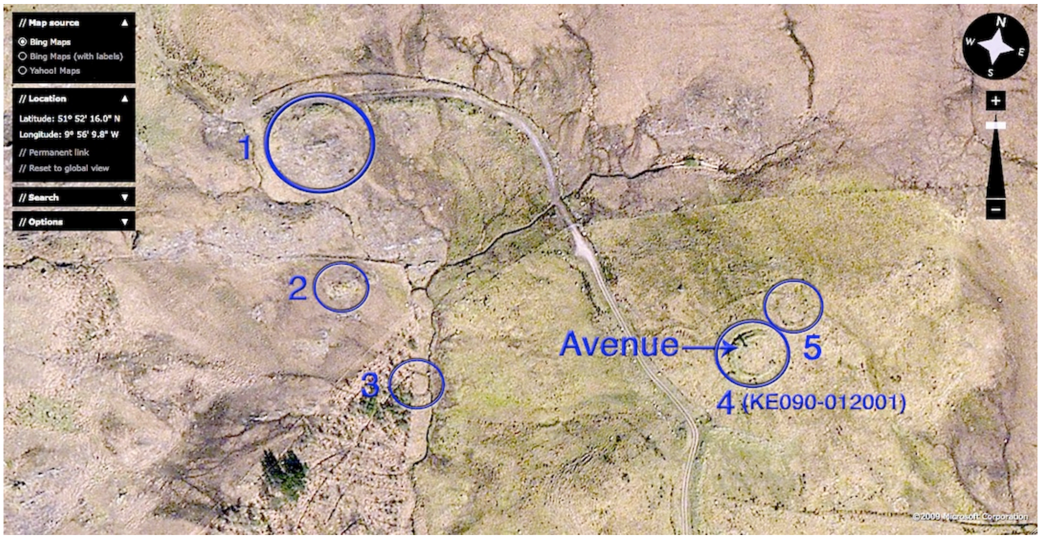


Latitude: 51° 52' 13.0" N
Longitude: 9° 56' 7.7" W

Aerial of Dromtine



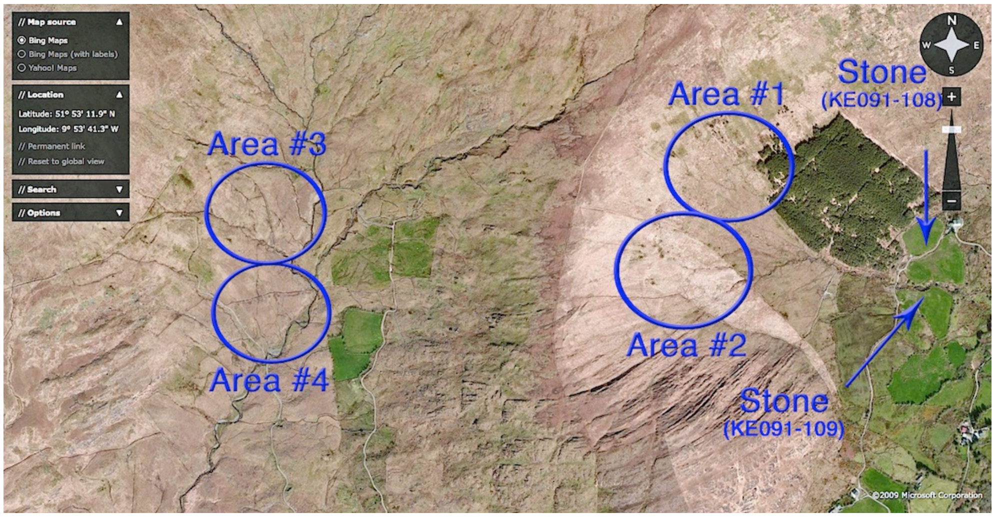
Dromtine panel



Latitude: 51° 52' 16.0" N
Longitude: 9° 56' 9.8" W

Aerial of area depicted on Dromtine panel

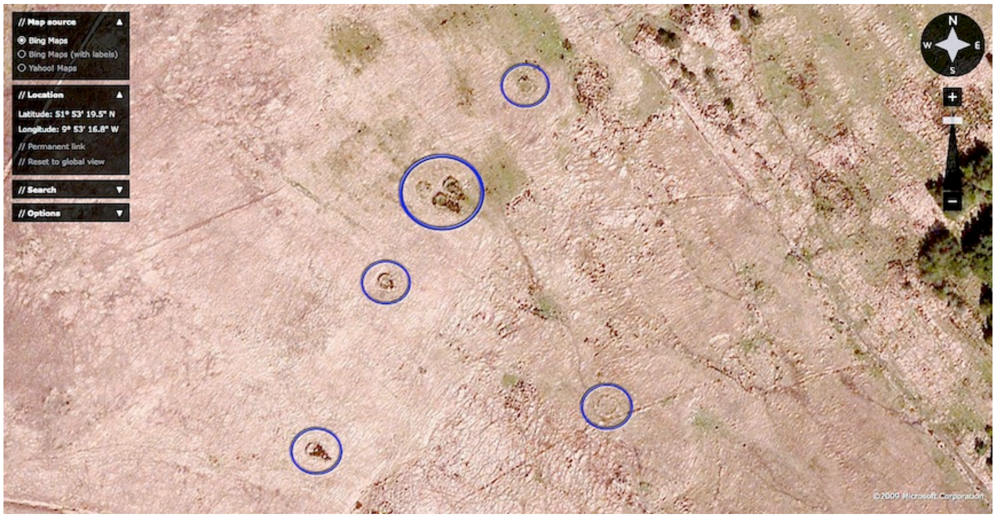
# Derryleagh



◉ Bing Maps

Latitude: 51° 53' 11.9" N
Longitude: 9° 53' 41.3" W

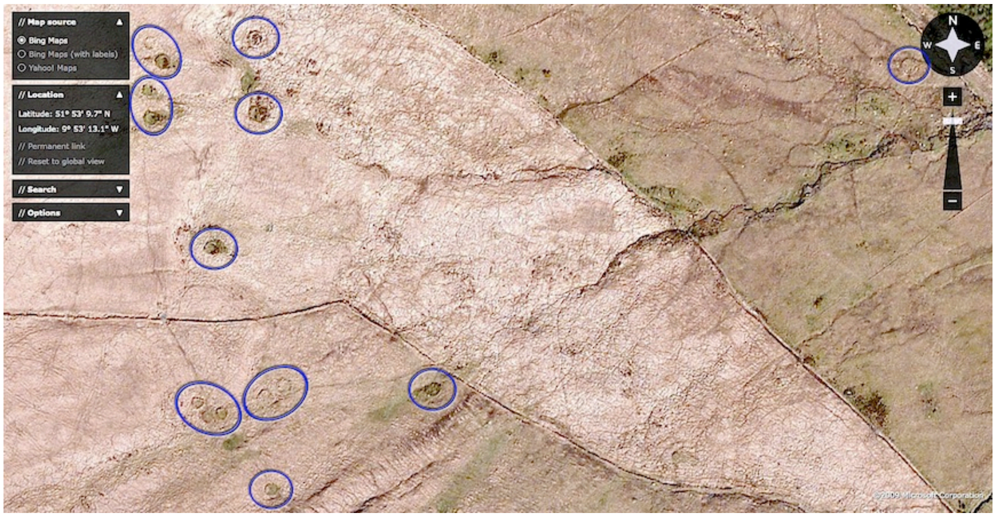
Aerial of Derryleagh



◉ Bing Maps

Latitude: 51° 53' 19.5" N
Longitude: 9° 53' 16.8" W

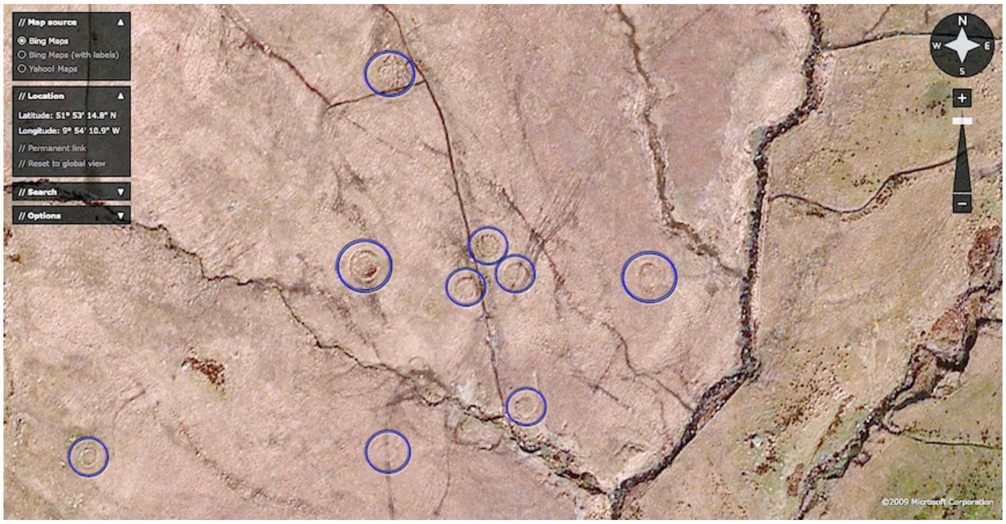
Aerial of Area #1 at Derryleagh



◉ Bing Maps

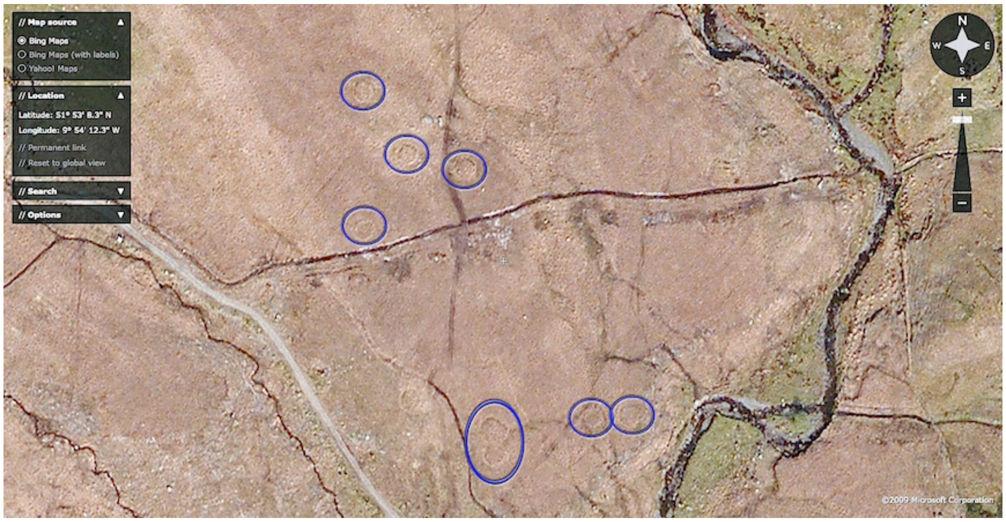
Latitude: 51° 53' 9.7" N
Longitude: 9° 53' 13.1" W

Aerial of Area #2 at Derryleagh



Latitude: 51° 53' 14.8" N
Longitude: 9° 54' 10.9" W

**Aerial of Area #3 at Derryleagh**

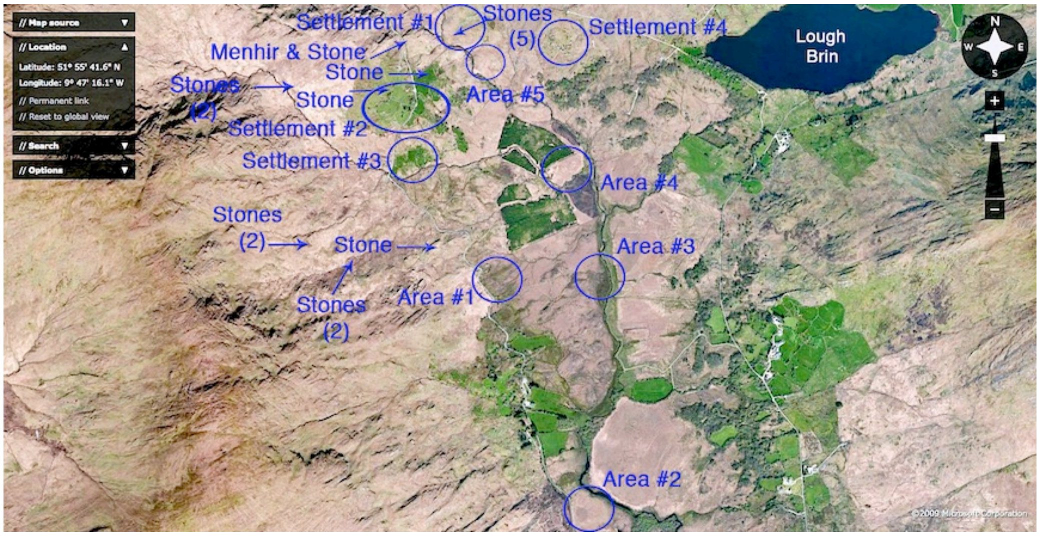


Latitude: 51° 53' 8.3" N
Longitude: 9° 54' 12.3" W

**Aerial of Area #4 at Derryleagh**

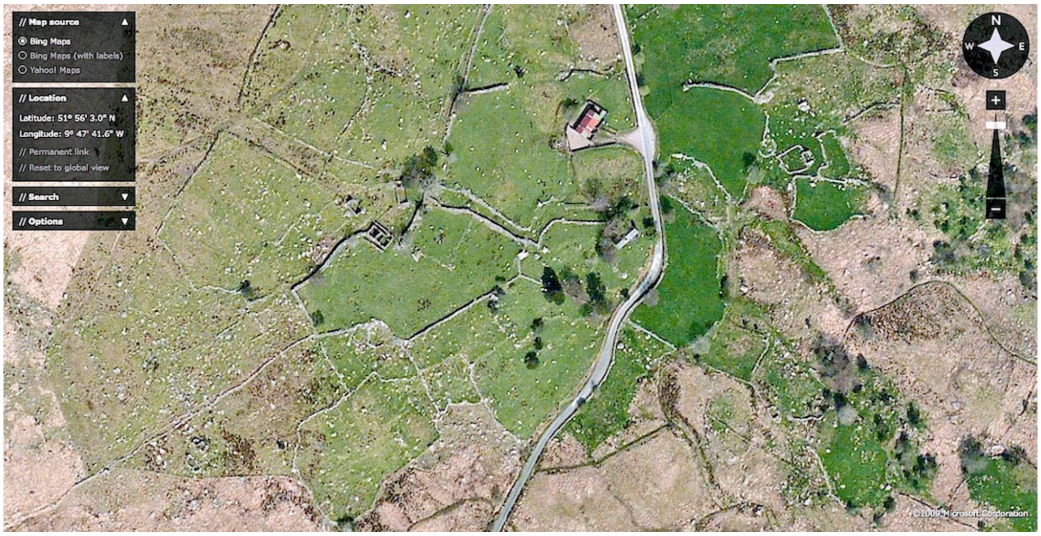
## Derrynablaha

Of the six sites within the complex that contain art, Derrynablaha has by far the most known panels, eighteen in all – fifteen are listed on EuroPreArt, with an additional three listed by the Royal Irish Academy – yet it has the fewest monuments, which is probably due to two factors. First and foremost, are a number of ancient settlements and field boundaries in the area dating to the Iron Age. As the inhabitants who built the settlements used stone as their primary building material, they likely scavenged the cairns to construct them. It's also likely that stones bearing other panels can be found within the walls of the settlements. Secondly, it is the most developed of the sites with respect to recent construction and agriculture. However, there are four areas within which a number of cairns still exist, though none can be matched to any of the panels. (see images, pages 79 – 83)



Latitude: 51° 55' 41.6" N
Longitude: 9° 47' 16.1" W

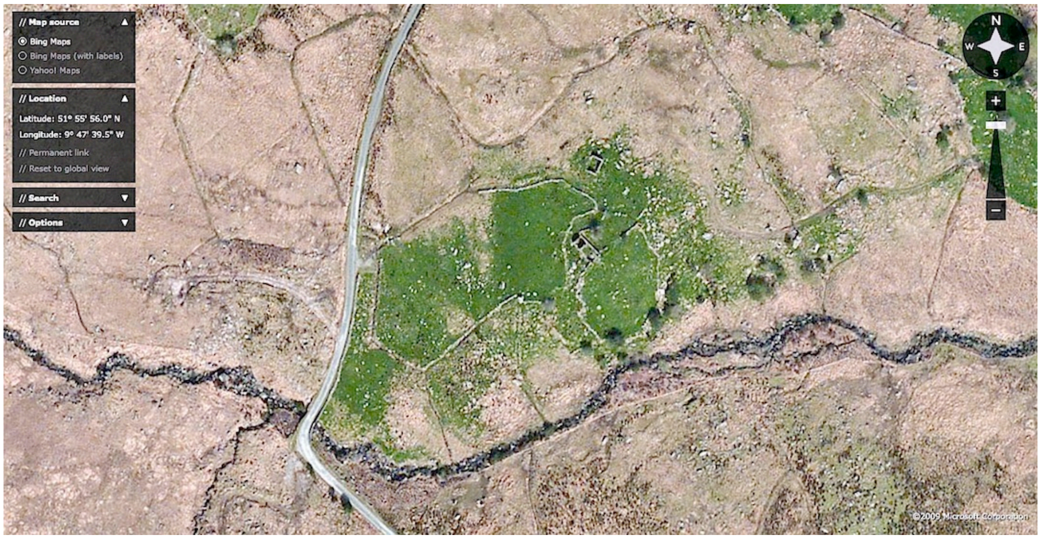
Aerial of Derrynablaha



● Bing Maps

Latitude: 51° 56' 3.0" N
Longitude: 9° 47' 41.6" W

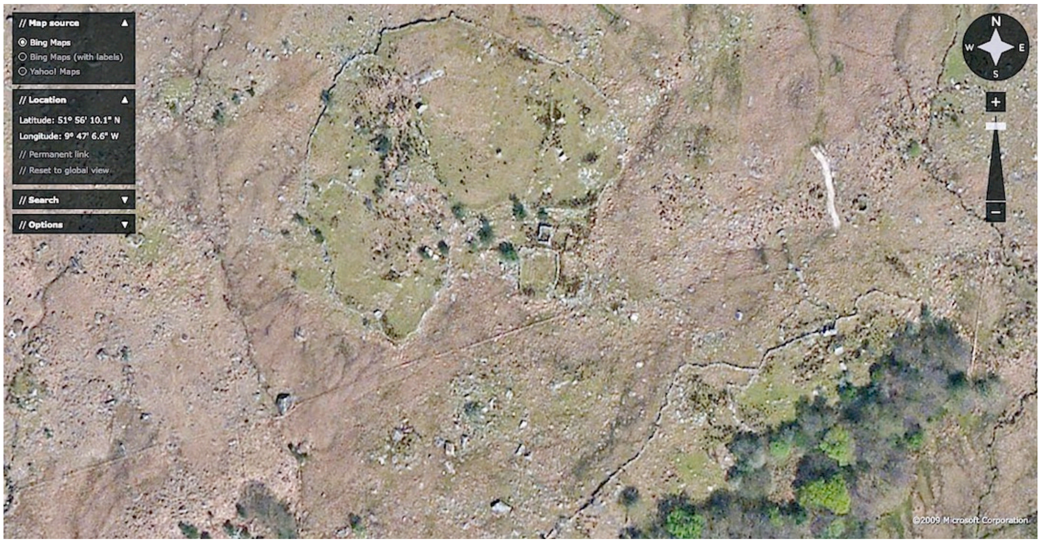
Aerial of Settlement #1



● Bing Maps

Latitude: 51° 55' 56.0" N
Longitude: 9° 47' 39.5" W

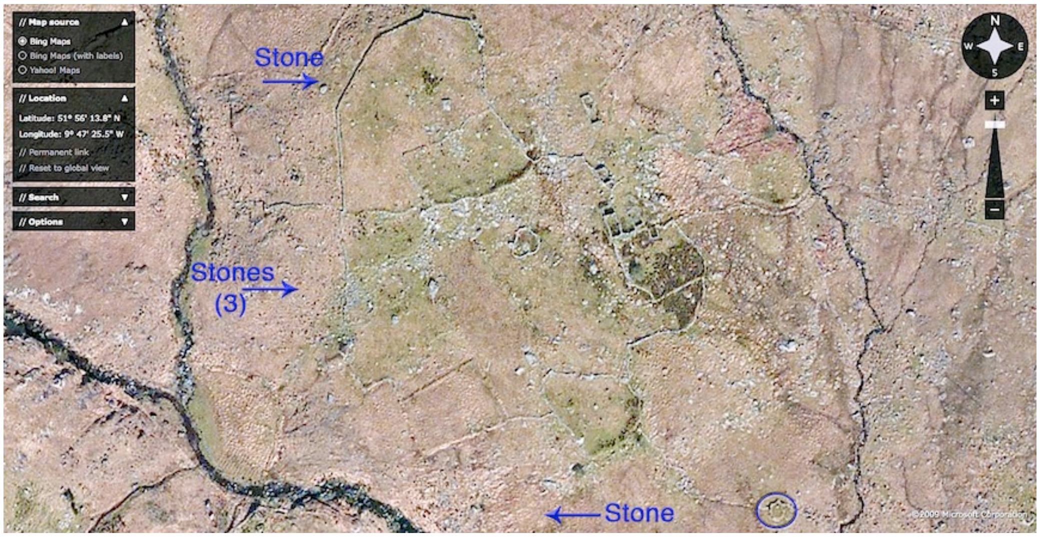
Aerial of Settlement #2



● Bing Maps

Latitude: 51° 56' 10.1" N
Longitude: 9° 47' 6.6" W

**Aerial of Settlement #3**

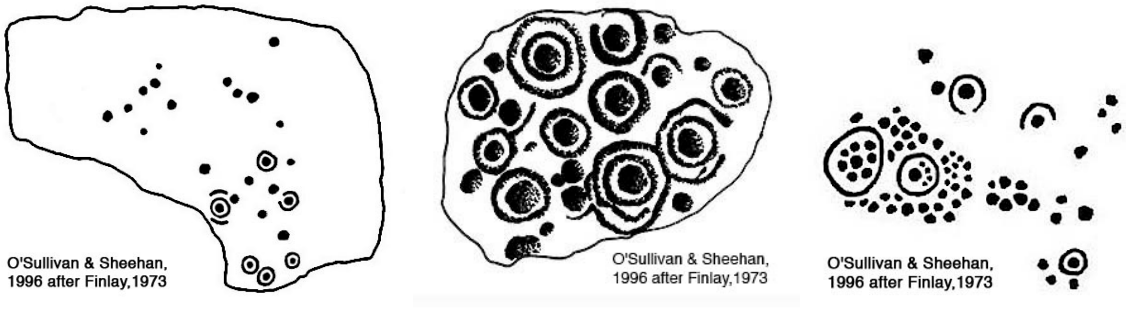


● Bing Maps

Latitude: 51° 56' 13.8" N
Longitude: 9° 47' 25.5" W

**Aerial of Settlement #4**

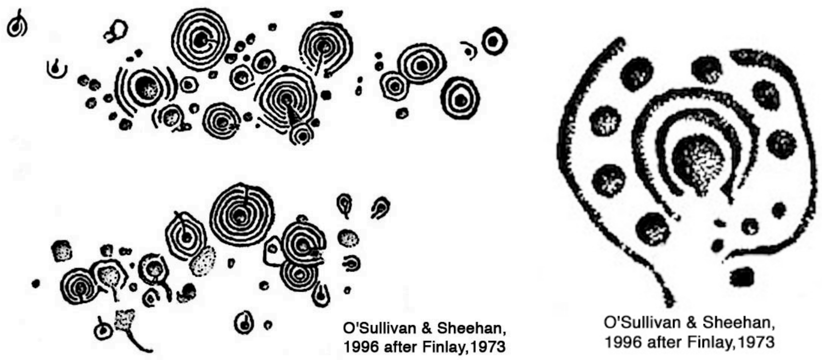
Following are drawings of nine panels listed on EuroPreArt, with the additional three listed by the RIA, the latter of which do not seem to fit the overall style of the others, though this may simply be due to 'artists choice' with respect to how the monuments were depicted.


O'Sullivan & Sheehan, 1996 after Finlay,1973

O'Sullivan & Sheehan, 1996 after Finlay,1973

O'Sullivan & Sheehan, 1996 after Finlay,1973

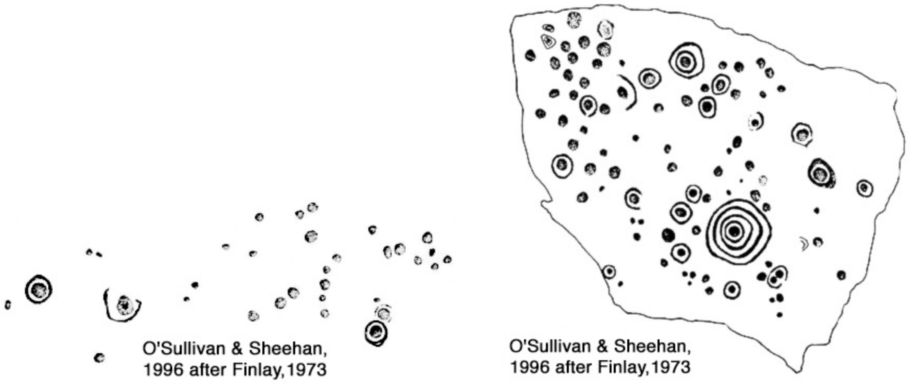
**Panels 1 – 3**



O'Sullivan & Sheehan, 1996 after Finlay, 1973

O'Sullivan & Sheehan, 1996 after Finlay, 1973

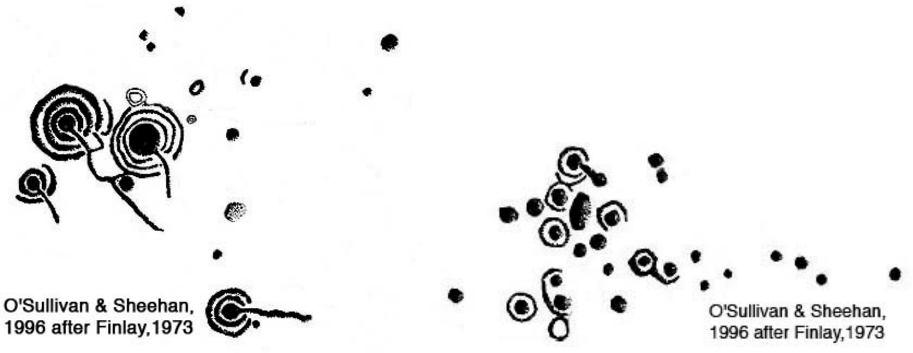
**Panels 5 & 6**



O'Sullivan & Sheehan, 1996 after Finlay, 1973

O'Sullivan & Sheehan, 1996 after Finlay, 1973

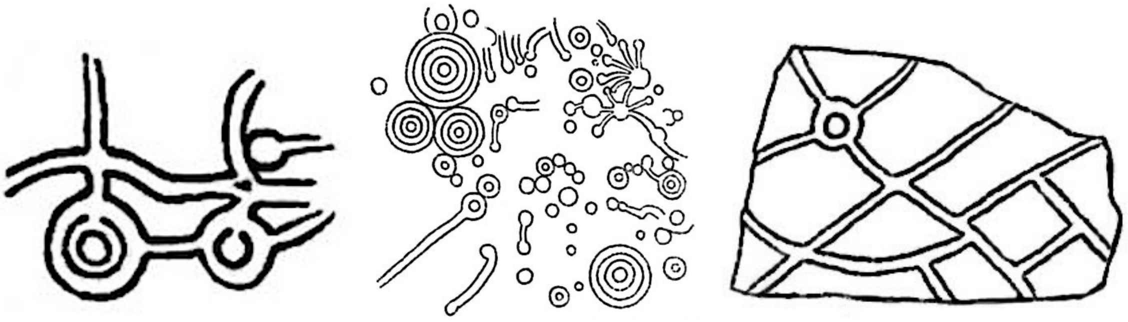
**Panels 7 & 11**



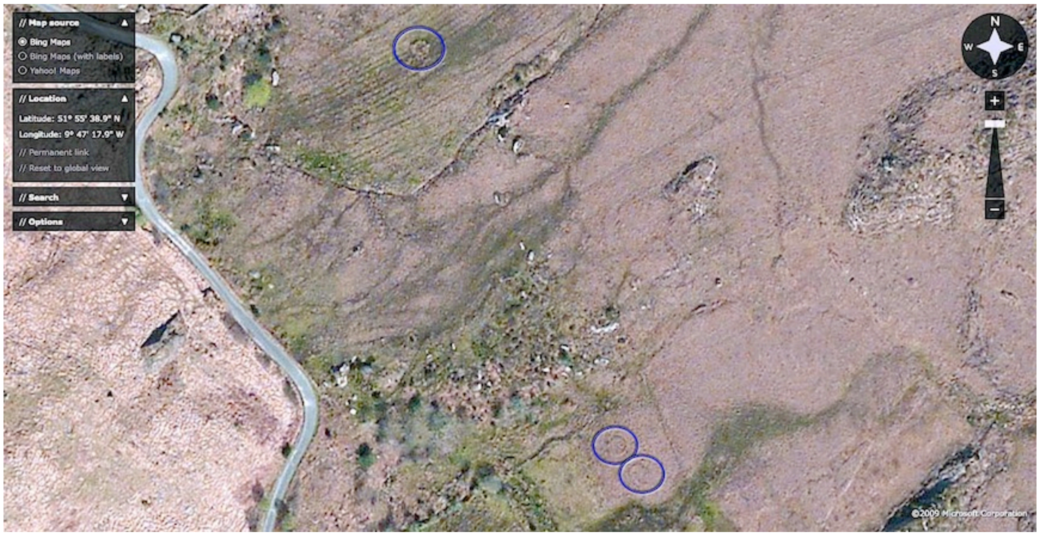
O'Sullivan & Sheehan, 1996 after Finlay, 1973

O'Sullivan & Sheehan, 1996 after Finlay, 1973

**Panels 12 & 14**



**Additional panels from the 'Proceedings of the Royal Irish Academy'**



// Map source

● Bing Maps

○ Bing Maps (with labels)

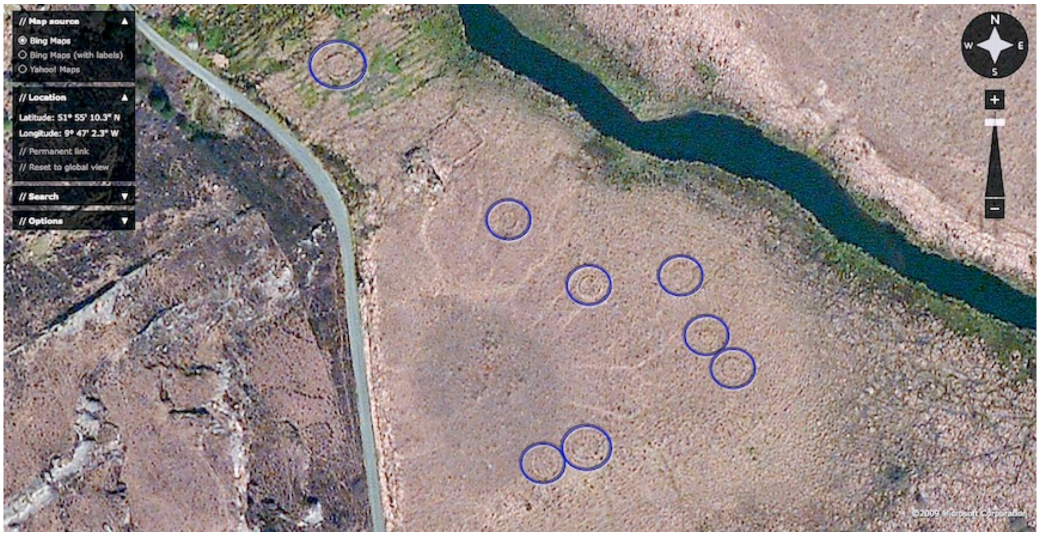
○ Yahoo! Maps

// Location

Latitude: 51° 55' 38.9" N

Longitude: 9° 47' 17.9" W

Aerial of Area #1 at Derrynablaha



// Map source

● Bing Maps

○ Bing Maps (with labels)

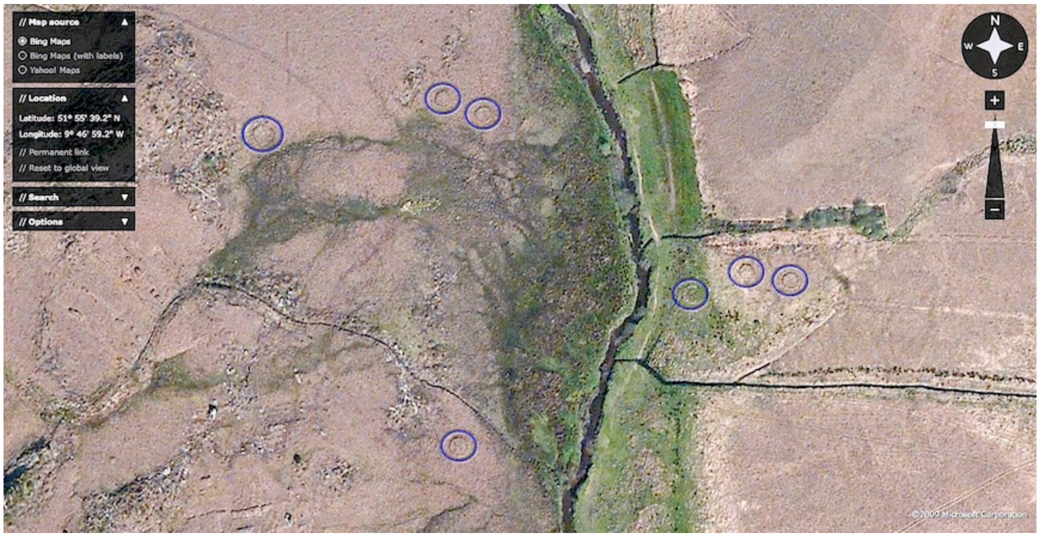
○ Yahoo! Maps

// Location

Latitude: 51° 55' 10.3" N

Longitude: 9° 47' 2.3" W

Aerial of Area #2 at Derrynablaha



// Map source

● Bing Maps

○ Bing Maps (with labels)

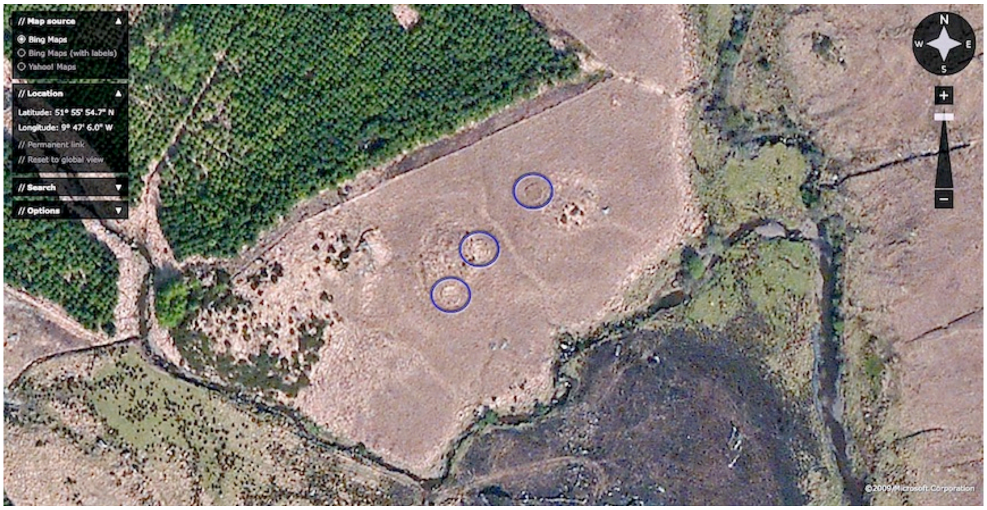
○ Yahoo! Maps

// Location

Latitude: 51° 55' 39.2" N

Longitude: 9° 46' 59.2" W

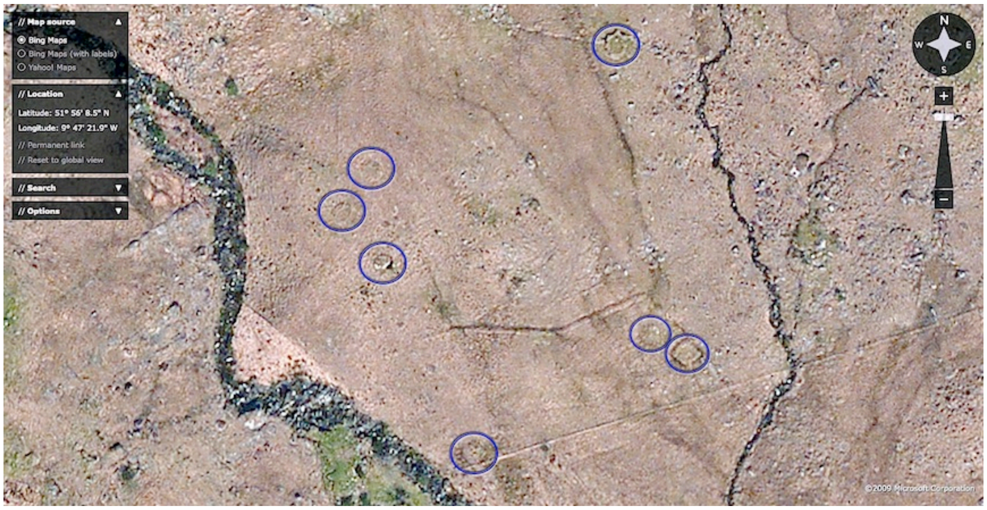
Aerial of Area #3 at Derrynablaha



// Map source
● Bing Maps
○ Bing Maps (with labels)
○ Yahoo! Maps

// Location
Latitude: 51° 55' 54.7" N
Longitude: 9° 47' 6.0" W

**Aerial of Area #4 at Derrynablaha**

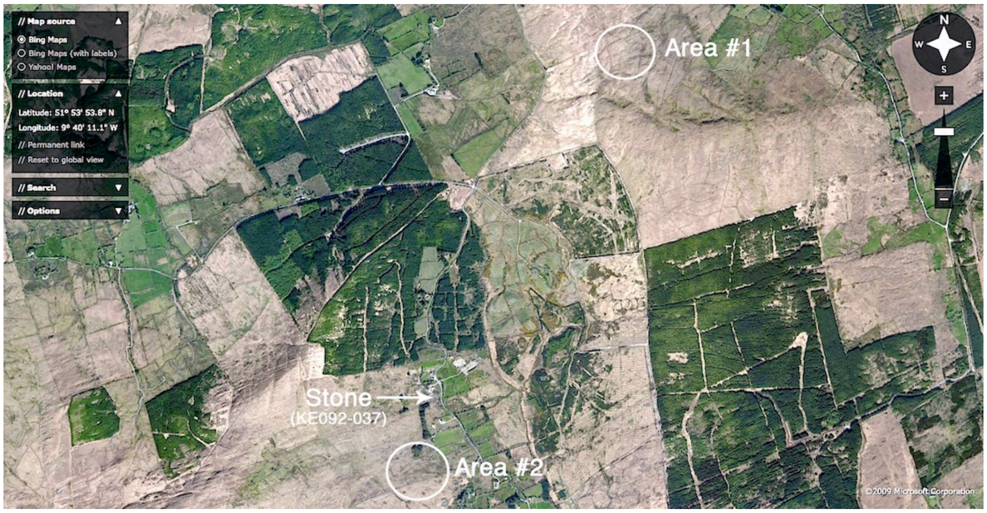


// Map source
● Bing Maps
○ Bing Maps (with labels)
○ Yahoo! Maps

// Location
Latitude: 51° 56' 8.5" N
Longitude: 9° 47' 21.9" W

**Aerial of Area #5 at Derrynablaha**

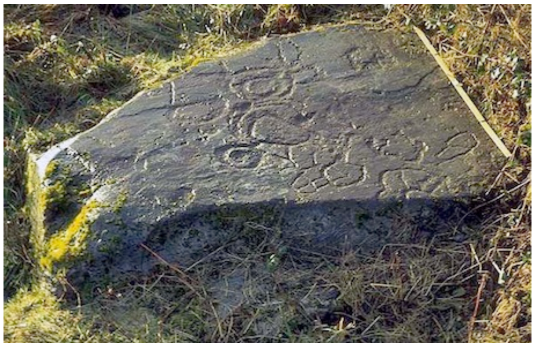
## Rossacoosane



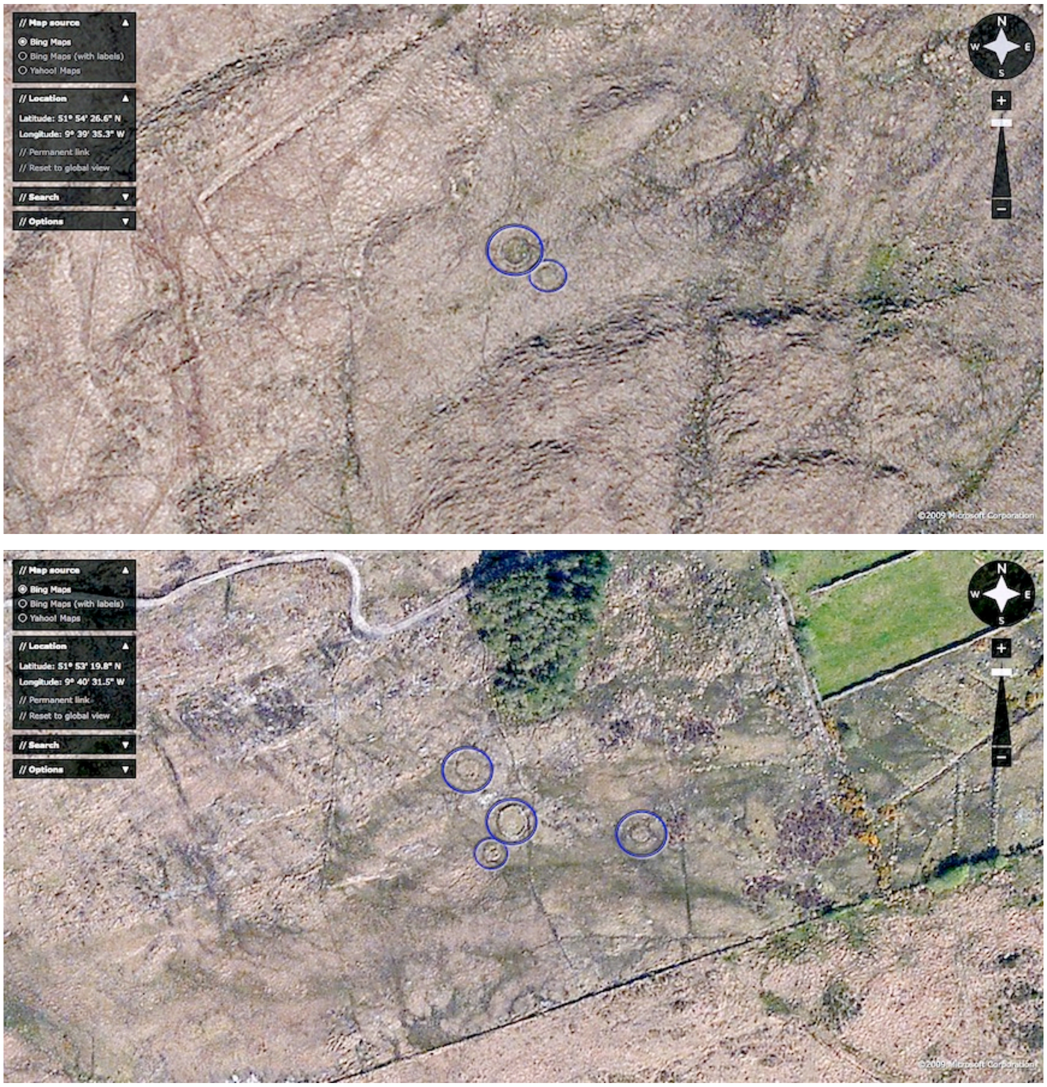
// Map source
● Bing Maps
○ Bing Maps (with labels)
○ Yahoo! Maps

// Location
Latitude: 51° 53' 53.8" N
Longitude: 9° 40' 11.1" W

**Aerial of Rossacoosane**



**Rossacoosane panel**



// Map source
● Bing Maps
○ Bing Maps (with labels)
○ Yahoo! Maps
// Location
Latitude: 51° 54' 26.6" N
Longitude: 9° 39' 35.3" W

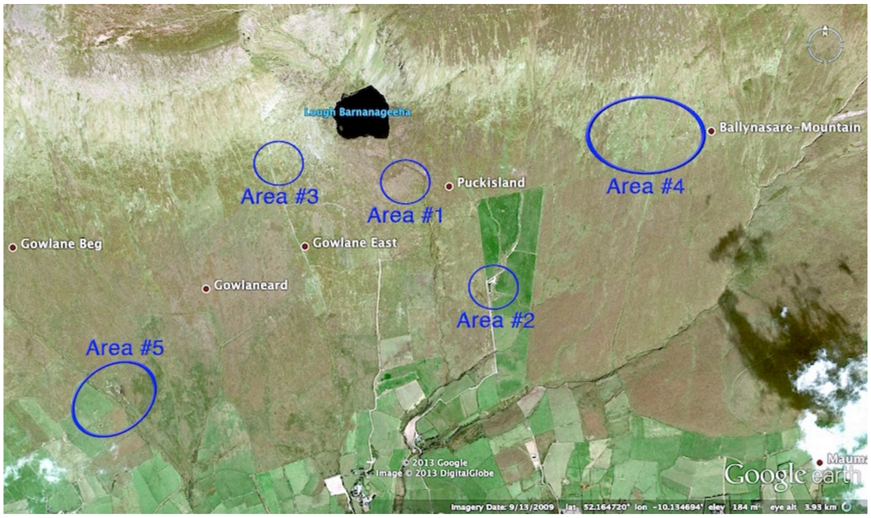
// Map source
● Bing Maps
○ Bing Maps (with labels)
○ Yahoo! Maps
// Location
Latitude: 51° 53' 19.8" N
Longitude: 9° 40' 31.5" W

**Aerials of Area #1 (top) and Area #2 (bottom) at Rossacoosane**

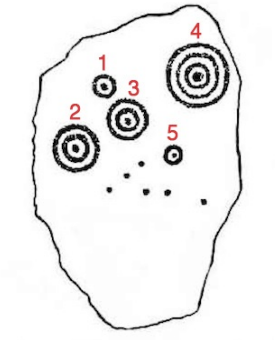
The last two sites within the complex consist of a stone circle at Kenmare, and stone circle and menhir at Dromatouk. As these sites appear at the beginning of the complex, if accessing it by land from the east, it should be considered that these monuments were sign posts or markers for the site beyond. (see image, page 72)

## Section 9: Gowlane & Ballynasare, Dingle Peninsula, County Kerry

As with the ‘Tullakeel Complex’, this is a heretofore unknown site, and the whereabouts of the stones since Graves recorded them in 1877, are also unknown.

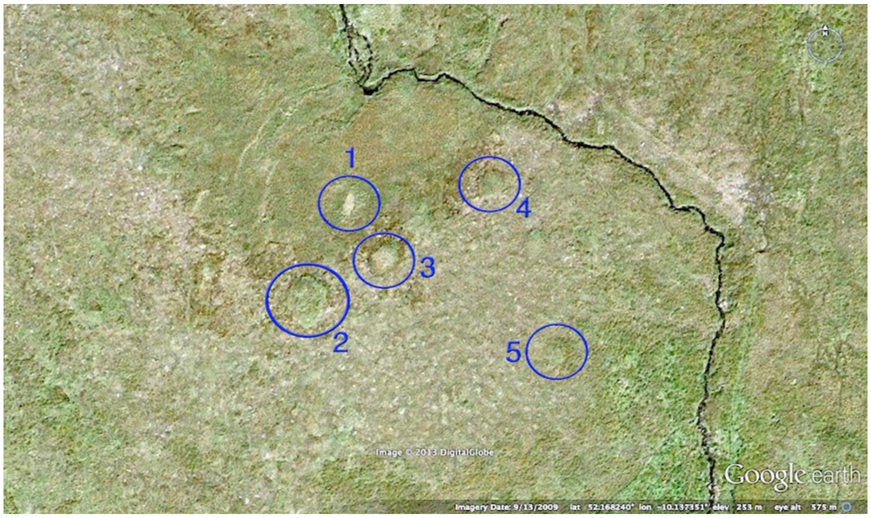


Aerial of Gowlane East & Ballynasare

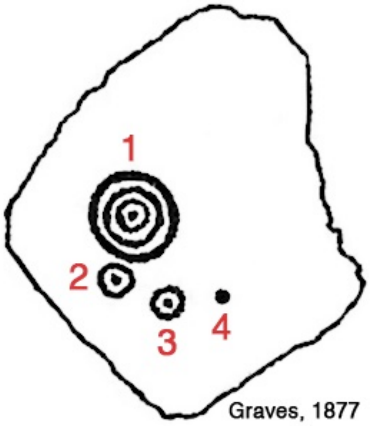


Graves, 1877

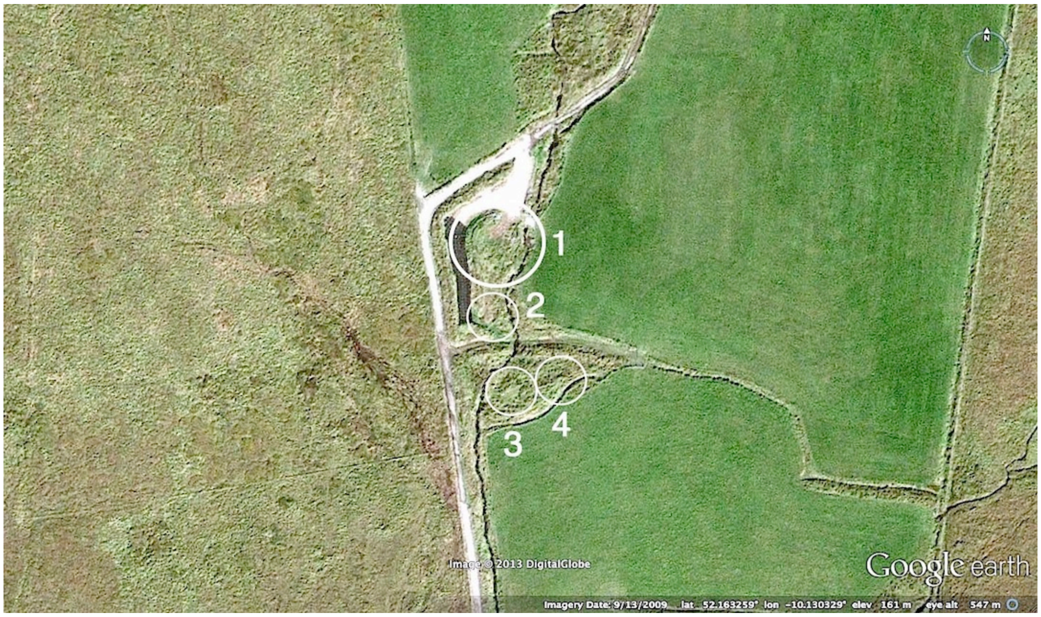
Gowlane Panel 1


1
4
3
2
5
Image © 2013 DigitalGlobe
Google earth
Imagery Date: 9/13/2009 lat 52.168240° lon -10.137351° elev 253 m eye alt 575 m

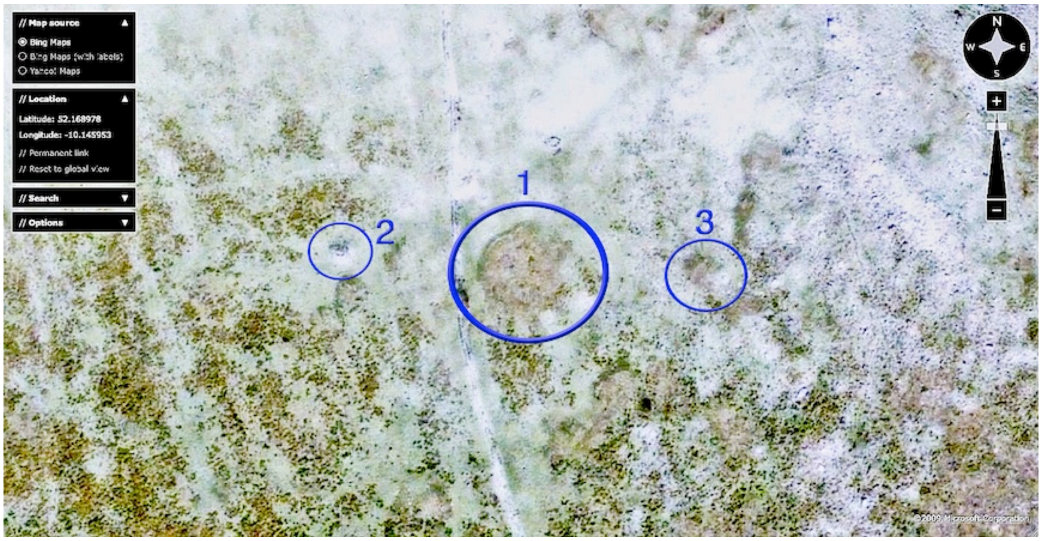
Aerial of area depicted on Gowlane Panel 1



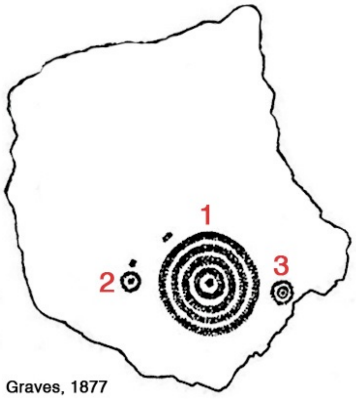
Gowlane Panel 2


1
2
3
4
N
Image © 2013 DigitalGlobe
Google earth
Imagery Date: 9/13/2009 lat 52.163259° lon -10.130329° elev 161 m eye alt 547 m

Aerial of area depicted on Gowlane Panel 2

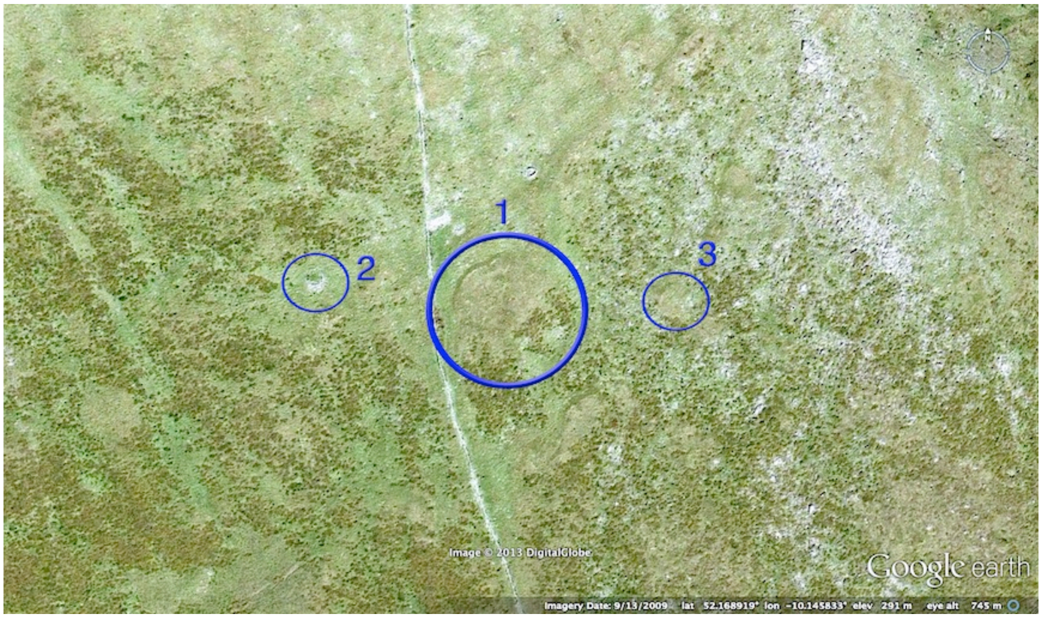


Aerial of area depicted on Gowlane Panel 3

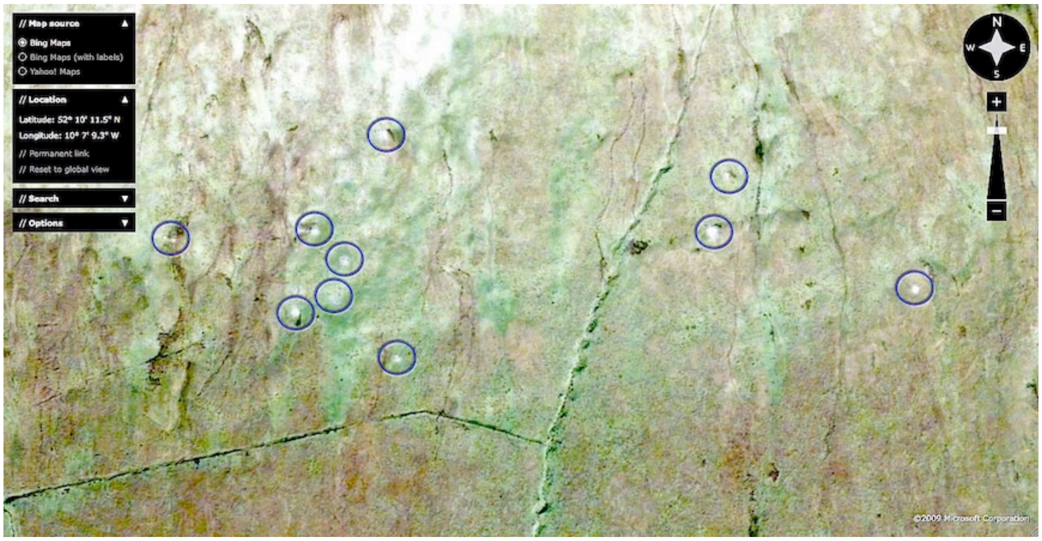


Graves, 1877

**Gowlane Panel 3**


1
2
3
Image © 2013 DigitalGlobe
Google earth
Imagery Date: 9/13/2009 lat 52.168919° lon -10.145833° elev 291 m eye alt 745 m

**Aerial of area depicted on Gowlane Panel 3**



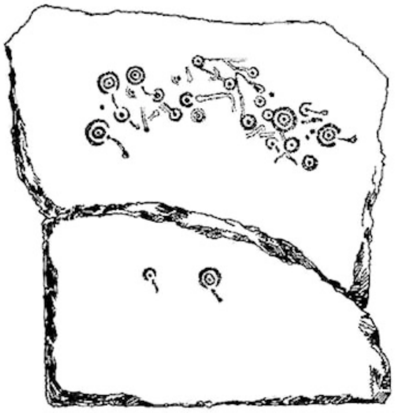
// Map source

● Bing Maps
○ Bing Maps (with labels)
○ Yahoo! Maps

// Location

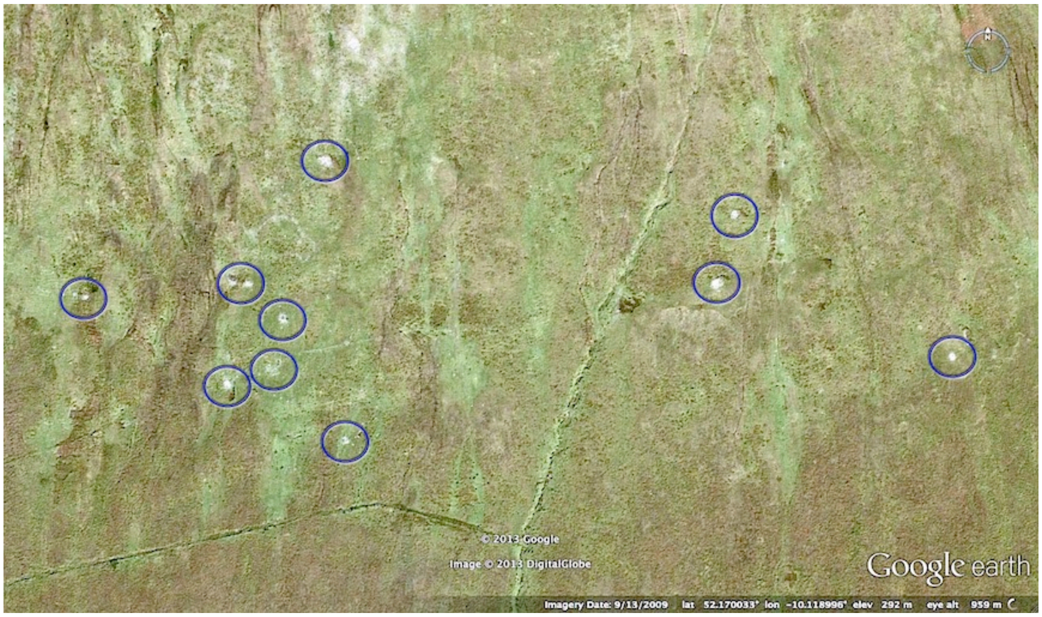
Latitude: 52° 10' 11.5" N
Longitude: 10° 7' 9.3" W

**Aerial of area likely depicted on Gowlane Panel 4**



Graves, 1877

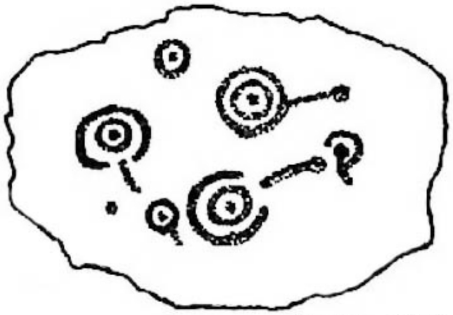
**Gowlane Panel 4**



© 2013 Google
Image © 2013 DigitalGlobe
Google earth
Imagery Date: 9/13/2009 lat 52.170033° lon -10.118996° elev 292 m eye alt 959 m

**Aerial of area likely depicted on Gowlane Panel 4**

Though Panel #5 has not been matched to a specific area, there are two monuments that have ‘avenues’ similar to those depicted on the Panel #5. (see image, top of page 89)



Graves, 1877

**Gowlane Panel 5**

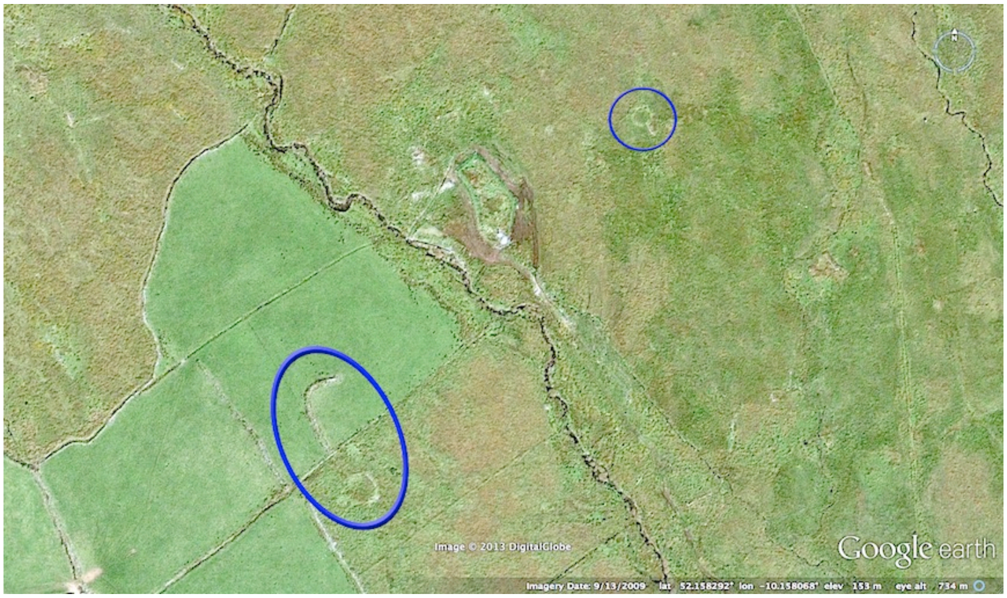
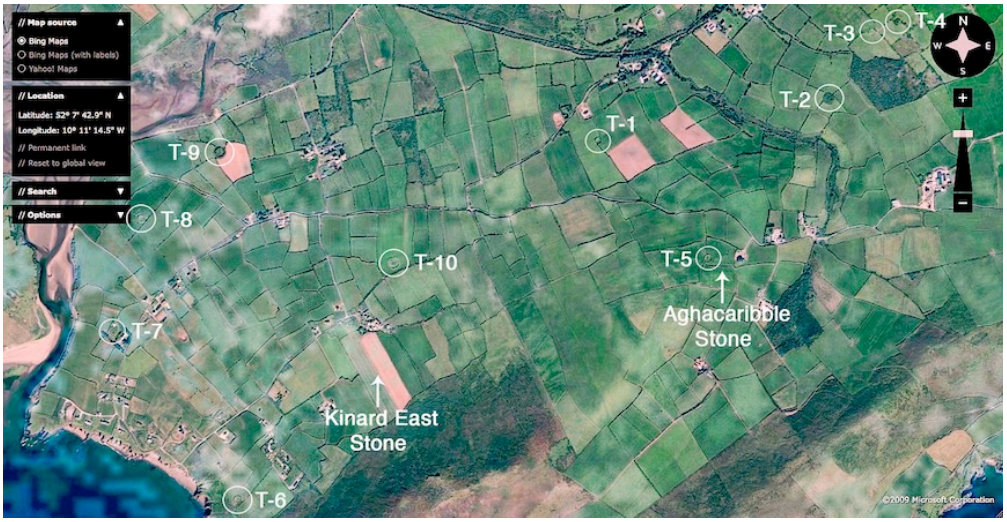


Image © 2013 DigitalGlobe
Google earth
Imagery Date: 9/13/2009 lat 52.158292° lon -10.158068° elev 153 m eye alt 734 m

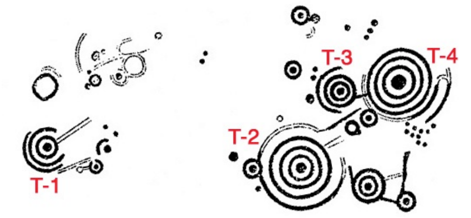
**Aerial of area possibly depicted on Gowlane Panel 5**

## Section 10: Aghacaribble & Kinard East, Dingle Peninsula, County Kerry

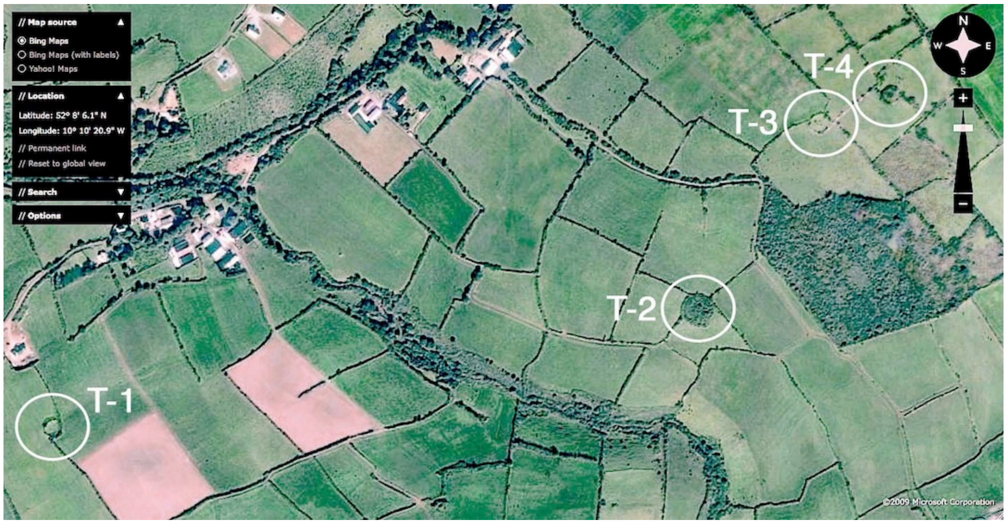
As with other sites, both in Ireland and the UK, Aghacaribble and Kinard East have been considered as separate sites, despite their proximity to each other. However, given that the ringed monuments are of the same style, as seen in the landscape and the panels, it must be considered that they were originally part of a wider ceremonial landscape, just as in the case of the Bend in the Boyne World Heritage Site. Though only two panels have been recorded, there is/was likely one or more that depicted both sites, or that depicted one or more monuments from both sites, as in the case of the monument labeled T-1 on Panels 1a & 1b at the Ringses and the Main Panel at Dod Law. (see Section 13, pages 100 – 103)



**Aerial of Aghacaribble & Kinard East**

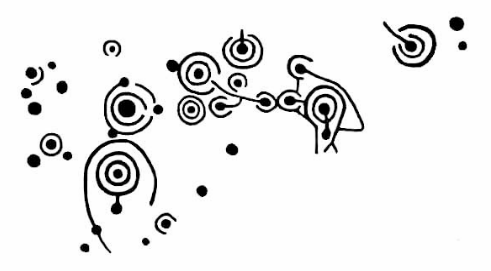


**Aghacaribble panel**

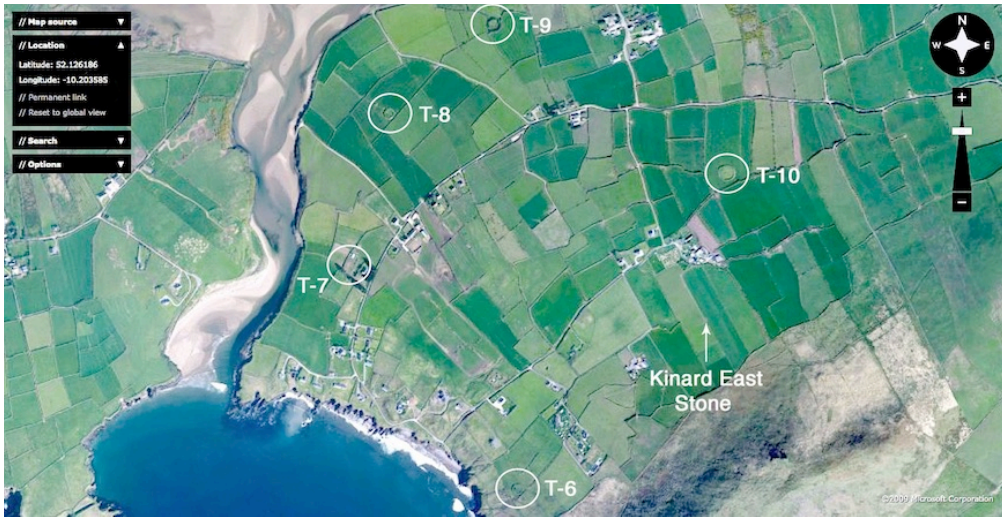


Latitude: 52° 8' 6.1" N
Longitude: 10° 10' 20.9" W

**Aerial of area depicted on Aghacaribble panel**



**Kinard East panel**



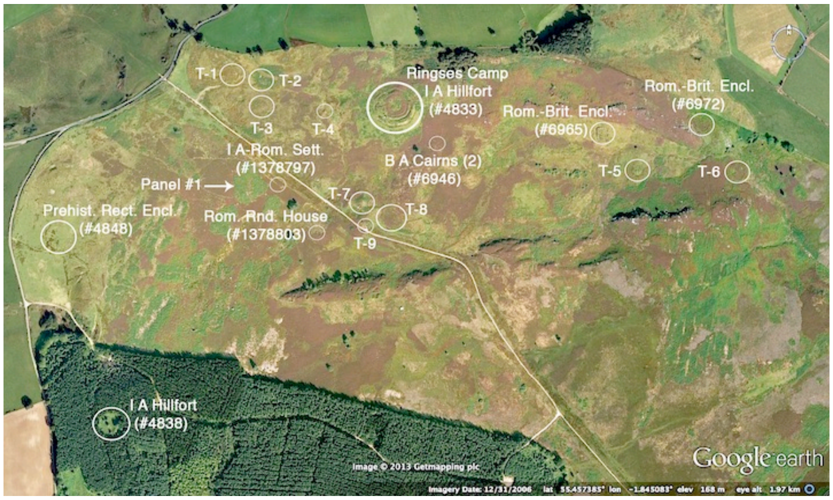
Latitude: 52.126186
Longitude: -10.203585

**Aerial of area likely depicted on Kinard East panel**

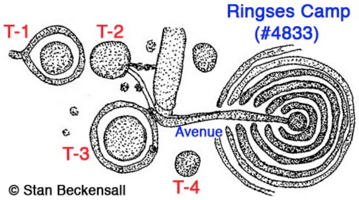
# England

## Section 11: Beanley Moor, Northumberland

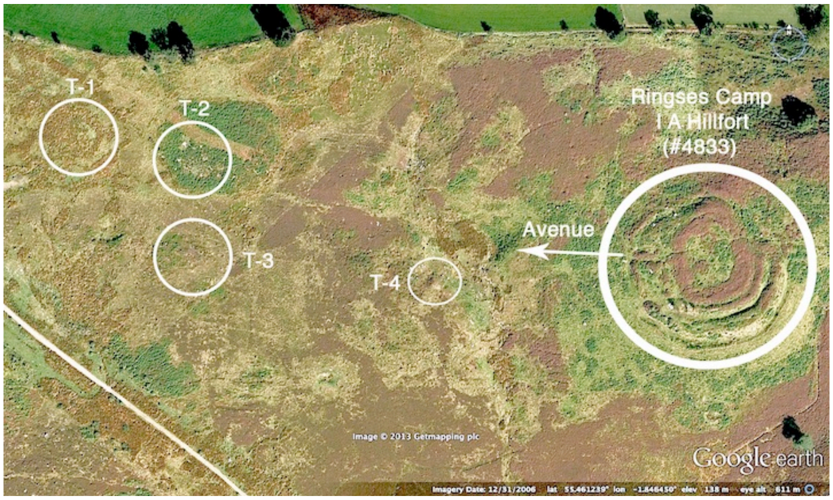
Though the largest monument on Beanley Moor, the Ringses Camp, is described as being an "*Iron Age enclosure"* which *"consists of three ditch and rampart circuits, with a probable entrance on the west side",* it originally consisted of five (5) ramparts and a counterscarp bank, with the inner two ditches infilled upon being reused as a settlement during the Iron Age.



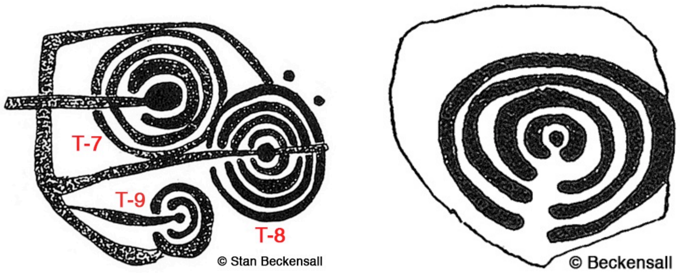
**Aerial of Beanley Moor**



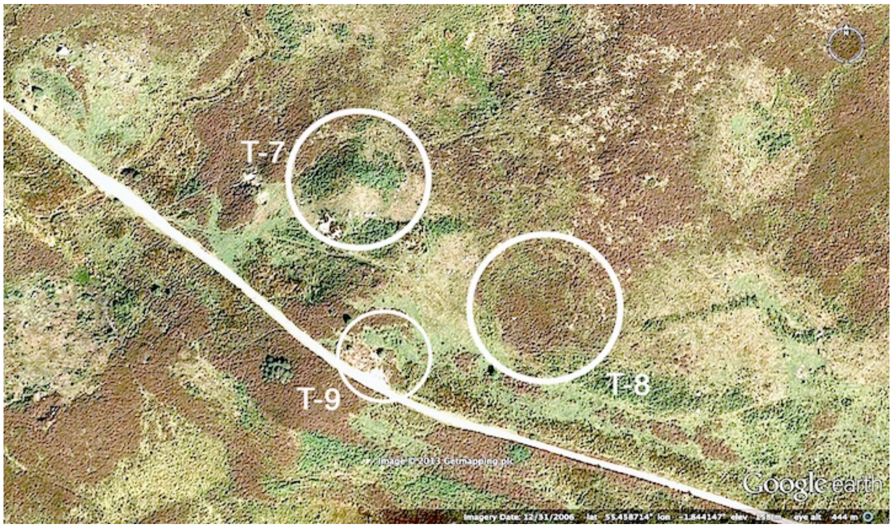
**Panel 1**


T-1
T-2
Ringses Camp
I A Hillfort
(#4833)
Avenue
T-3
T-4
Image © 2013 Getmapping plc
Google earth
Imagery Date: 12/31/2006 lat 55.461239° lon -1.846450° elev 138 m eye alt 611 m

**Aerial of area depicted on Panel 1**

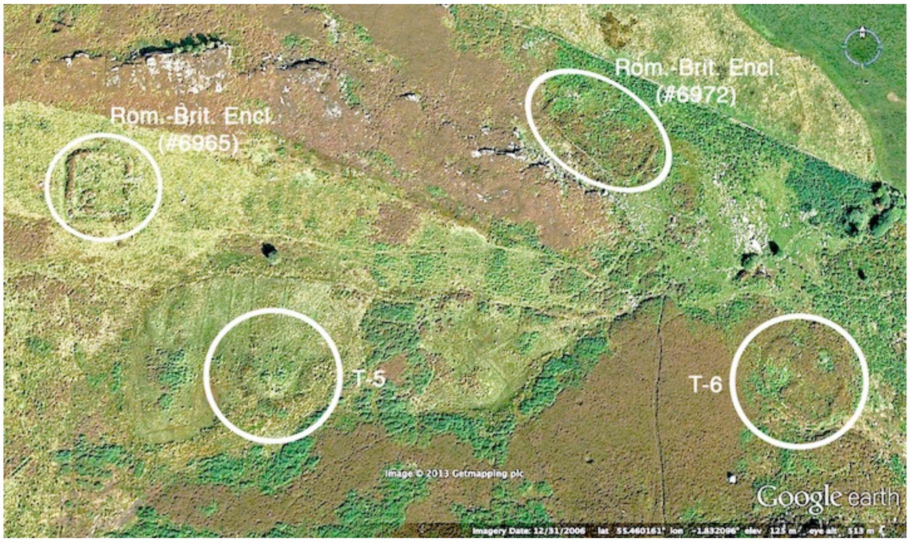


**Panels – Portable A & B**


T-7
T-9
T-8
Image © 2013 Getmapping plc
Google earth
Imagery Date: 12/31/2006 lat 55.458714° lon -1.844147° elev 158 m eye alt 444 m

**Aerial of area depicted on Portable A**

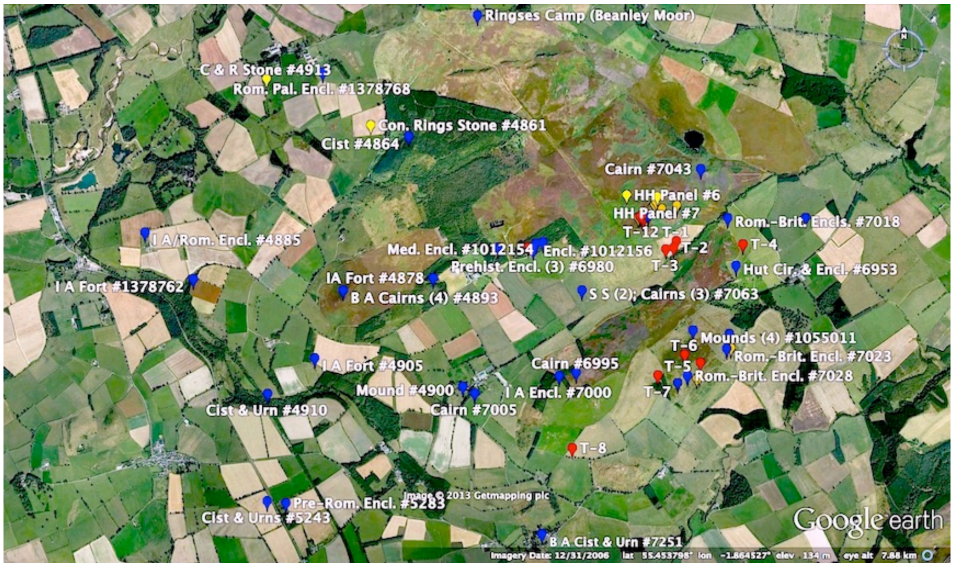
As seen on the drawing of the Portable B panel, the symbol nearly covers the entire surface of the stone. Though it only depicts one multivallated enclosure, it may have been an earlier version of a monument on Panel #1 or Portable A, which means it would have been obsolete following the addition of one of the other multivallated enclosures.


Rom.-Brit. Encl. (#6972)
Rom.-Brit. Encl. (#6965)
T-5
T-6
Image © 2013 Getmapping plc
Google earth
Imagery Date: 12/31/2006 lat 55.460161° lon -1.832096° elev 125 m eye alt 513 m

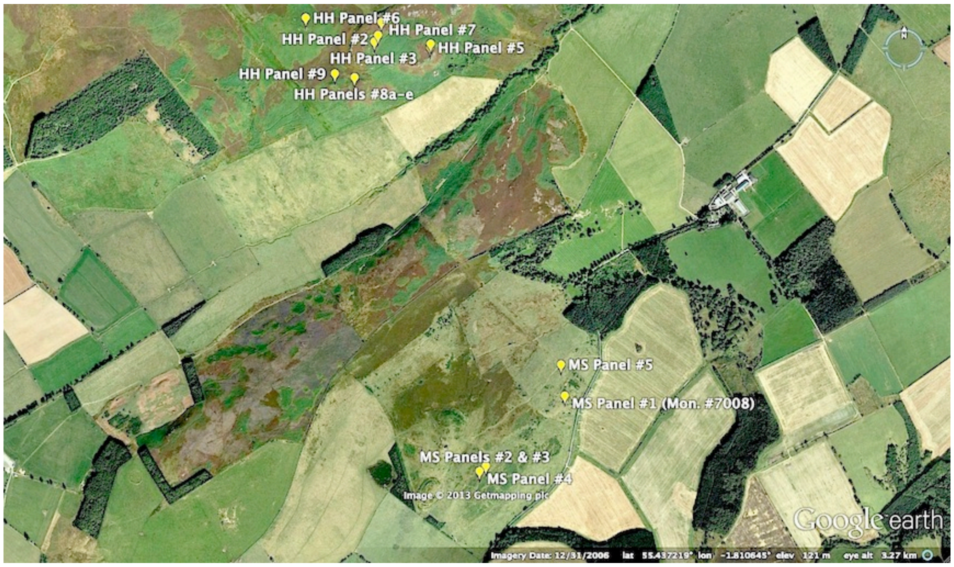
**Aerial of area east of the Ringses Camp**

## Section 12: Hunterheugh, Northumberland

At Hunterheugh there are two areas which contain panels of art; Hunterheugh (HH) and Midstead (MS). Given that they date to the Neolithic and/or Early Bronze Age, and depict areas of the site as it existed during that period, the vast majority of the monuments, as recorded by English Heritage, have been misdated to the Iron, Roman-British and Medieval Ages.

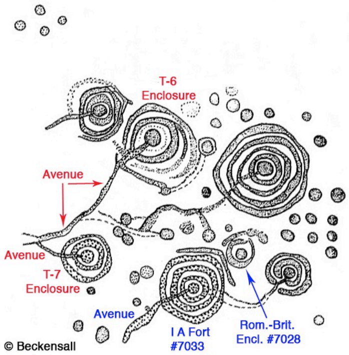


Aerial of Hunterheugh showing proximity to Beanley Moor

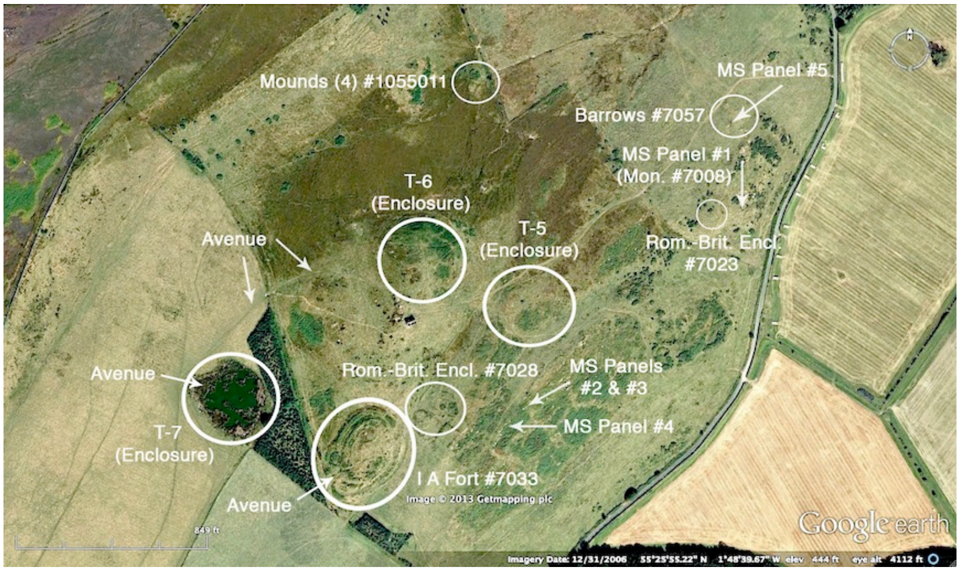


Aerial of Hunterheugh & Midstead panels

The most significant of the panels is HH Panel #2 depicting the core area of the site, which consists of seven (7) concentric ringed enclosures and numerous mounds. In the case of Monuments #7028 and #7033, they've been dated to the Iron and Roman-British Ages respectively. What the dating is based on, is most likely the fact that in October of 1824 a lachrymatory – a small vase found in ancient Roman sepulchers, presumably used to catch the tears of mourners – was found by a woman harvesting crops. However, an excavation by Berwick Naturalist Club unearthed half of a porphyry quern. As querns were used during the Neolithic for hand-grinding cereals, it's more logical that the monuments date to the Neolithic. The monument labeled Iron Age (I A) Fort #7033, is depicted as a mound surrounded by three (3) ramparts with an 'avenue', which is exactly how it appears in the landscape today. *"This earthwork is strongly fortified with 3 ramparts of stone and earth and 2 intermediate ditches"* with an *"entrance apparently at southwest."* (English Heritage, d)



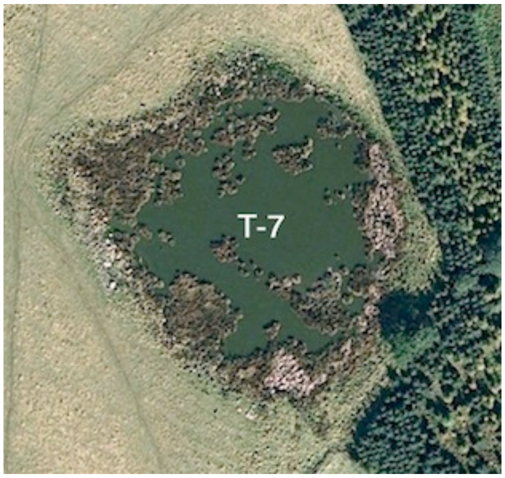
**Hunterheugh Panel 2**



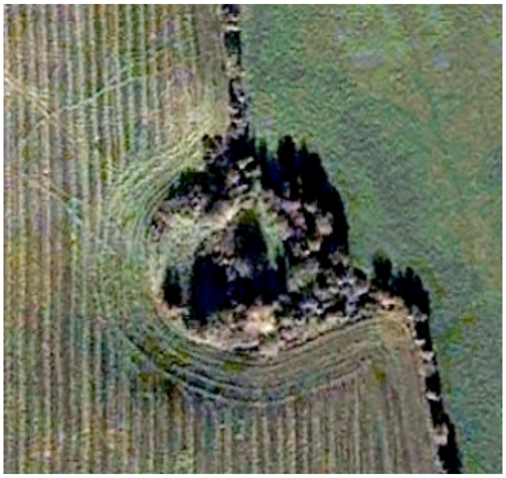
**Aerial of area depicted on HH Panel 2**

Monuments #7028 and #7033 may also have been dated based on historical archives, which are notably flawed. Case in point, are An Forradh and Tech Cormaic on the Hill of Tara, both of which have been ascribed to Cormáic mac Art, who reigned from 254 – 277 AD. However, based on the panel of art within the Mound of the Hostages, and magnetic gradiometry images, both actually date to the late Neolithic. (Moriarty, 2007) Lastly, they appear to be dated in part because of their resemblance to monuments typical of the period. In the case of #7028*, “Much of the interior contains the remains of stone founded hut circles and stone walling typical of later RB settlements.”* (English Heritage, d) Though the monument may have been used during the Roman-British Age, it was constructed millennia earlier and simply remodeled.

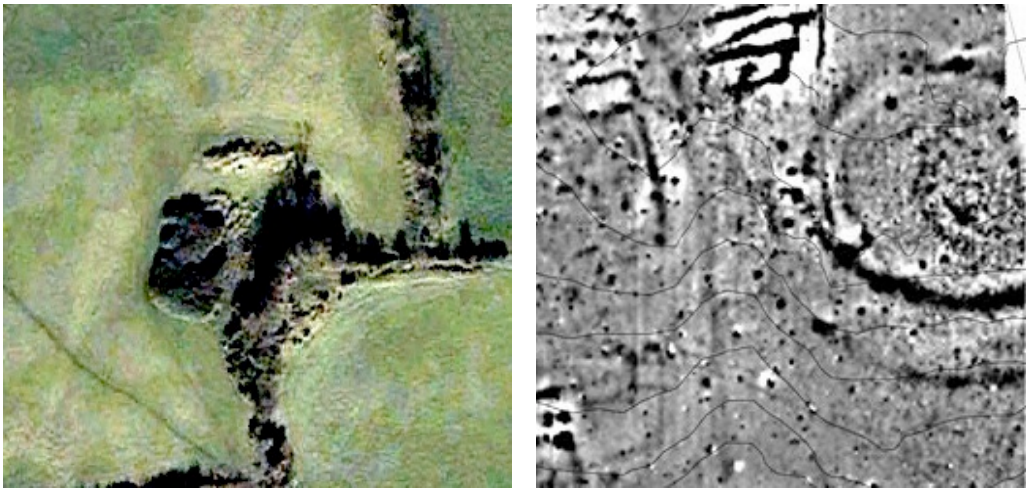
Interestingly, in the English Heritage description of Mon. #7033, it states there is a *“good water supply nearby”,* this in reference to the feature labeled T-7 on the drawing and aerial photo. However, taking into account Hunterheugh Panel #2, which dates to the Neolithic or Early Bronze Age, the Neolithic quernstone, the barrows (#7057) and mounds (#1055011) which also likely date to the Neolithic or Early Bronze Age, T-7 was in all probability a double-ringed Neolithic or Early Bronze Age enclosure, that over the millennia collapsed and subsequently filled with groundwater. This parallels what exists at Knowth and Monknewton, in County Meath, where ‘ritual ponds’ have been determined to have actually been ceremonial enclosures.



**Aerial of T-7, Hunterheugh**

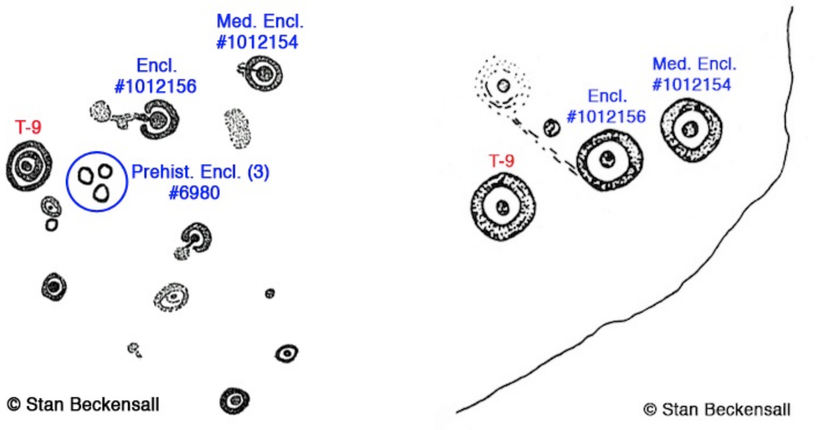


**Aerial of Monknewtown**

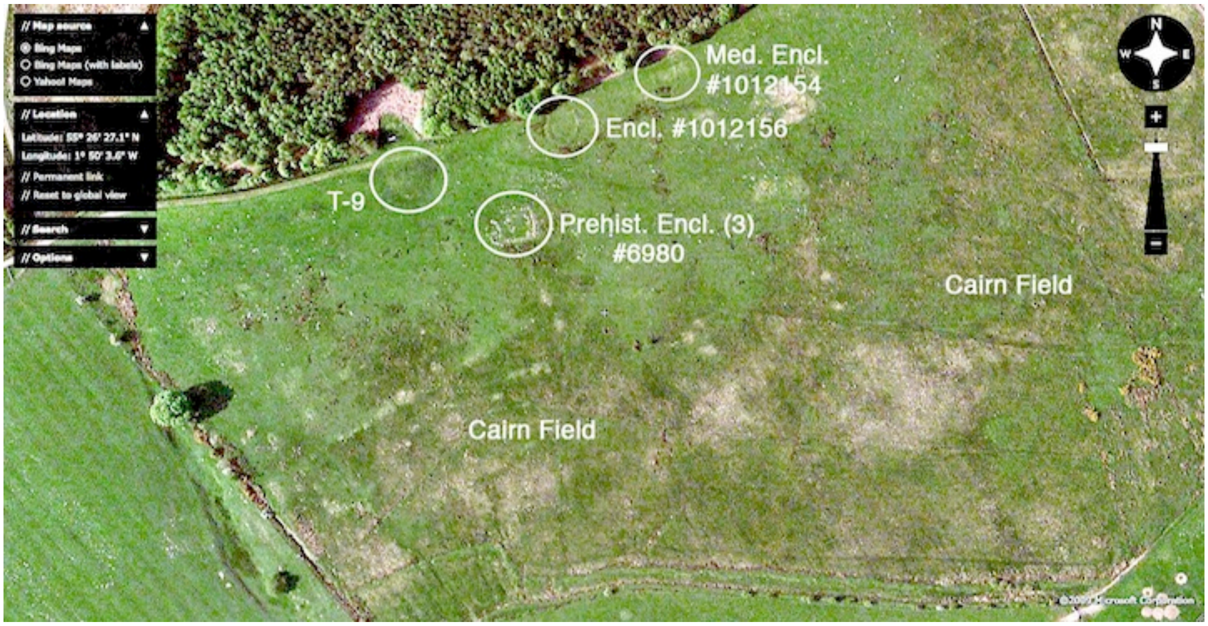


**Aerial (L) and Lidar (R) of T-4, Knowth**

As for HH Panels #1(NE) & #4, both of which are found along the same rock outcropping, the latter appears to be an earlier version of the area depicted. As the small enclosures south of Encl. #1012156 were constructed, there was no room on Panel #4 to depict them, so the stone became obsolete, at which point it may have been intentionally hidden by groundcover. The key symbol(s) in matching Panel #1 to the area, were the three (3) rings, which match the description of the three (3) enclosures listed on English Heritage as pre-historic enclosures (#6980). Those three monuments, like several others at the site, have been described by English Heritage as 'hut circles', when in fact they're likely ring cairns.



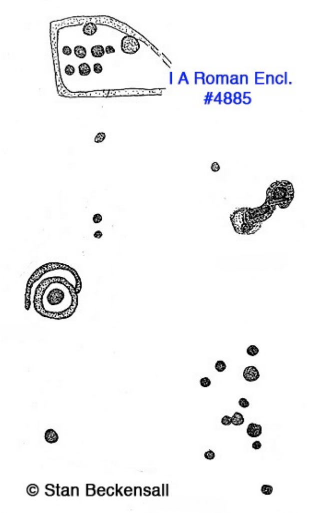
**Hunterheugh Panel 1 & Panel 4**



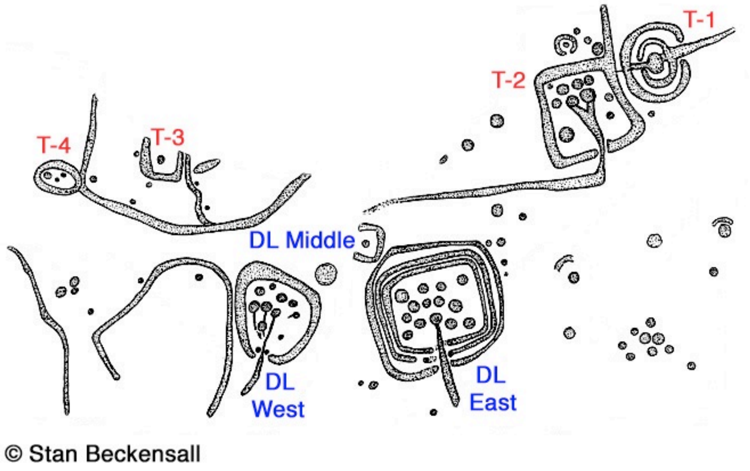
**Aerial of area depicted on HH Panels 1 & 4**

HH Panel #1c (N) displays a rather unique D-shaped symbol (Mon. #4885), similar to Dod Law East (#6317) & West (#6272) located roughly 19km NNE of Hunterheugh, both of which English

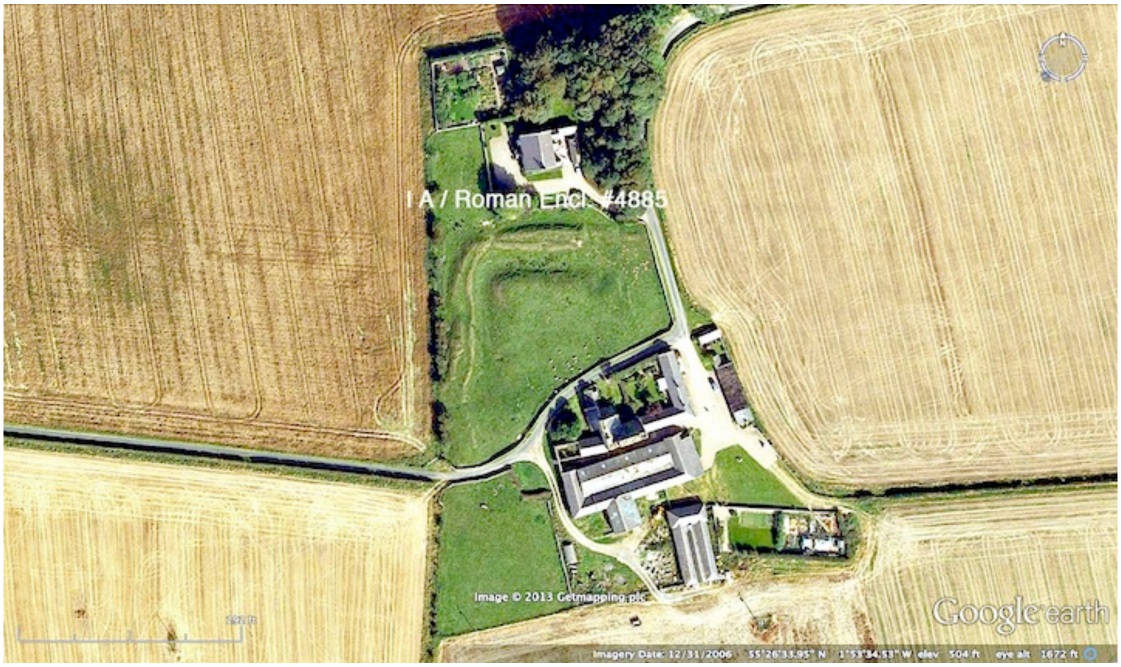
Heritage has also described as Iron Age Roman Enclosures. Due to the lack of sub-surface geophysical data, that’s the only symbol on the panel which can be matched to the immediate area. However, the other symbols on the panel will aid in locating the remaining monuments that are depicted.



**HH Panel 1c**

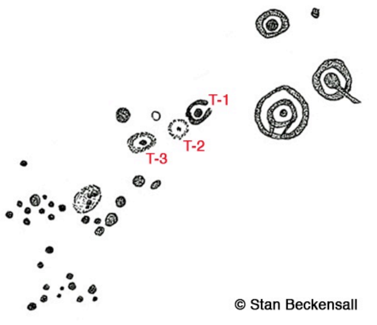


**Main panel at Dod Law**

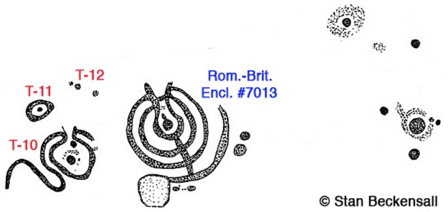

I A / Roman Encl. #4885
Image © 2013 Getmapping plc
Google earth
Imagery Date: 12/31/2006 55°26'33.95" N 1°53'34.53" W elev 504 ft eye alt 1672 ft

**Aerial of area depicted on Panel 1c**

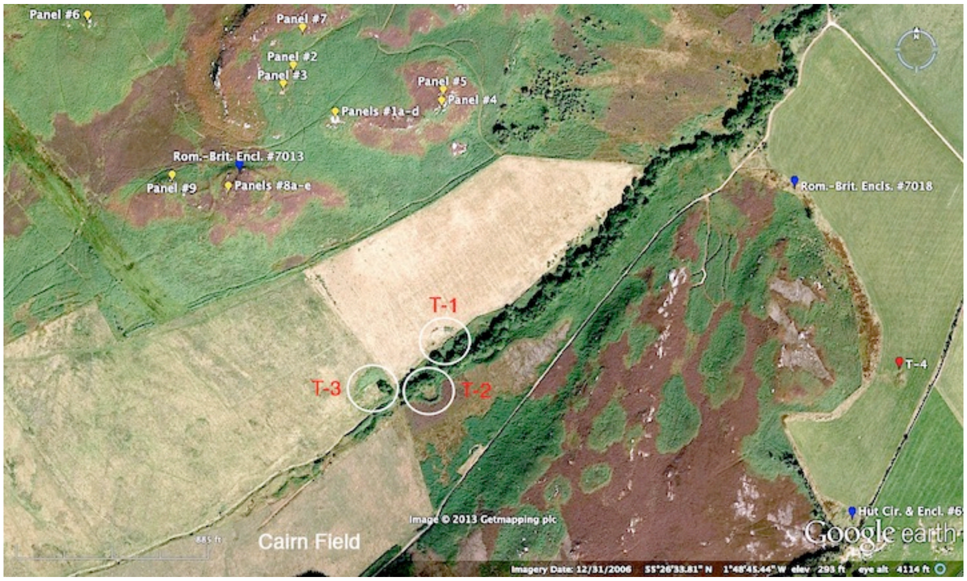
There are three symbols on HH Panel #1a that match three monuments, but here again, due to the lack of geo-physical data, it’s impossible match any of the other symbols. The area immediately to the south and south-west of the monuments are likely cairn fields. (see images on following page)



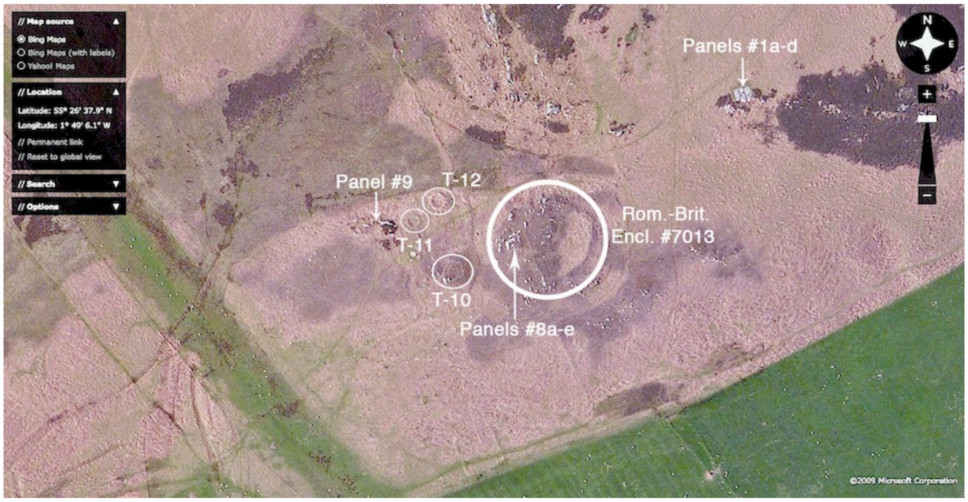
Hunterheugh Panel 1a



HH Panel 1d



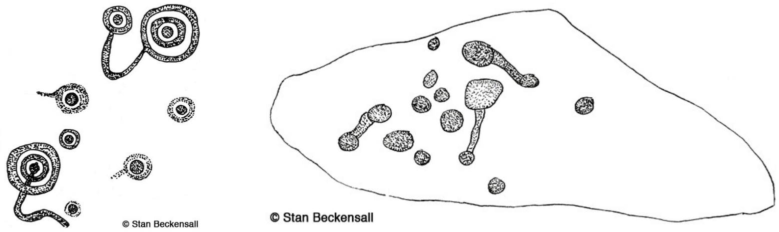
Aerial of area depicted on HH Panel 1a



Aerial of area depicted on HH Panel 1d

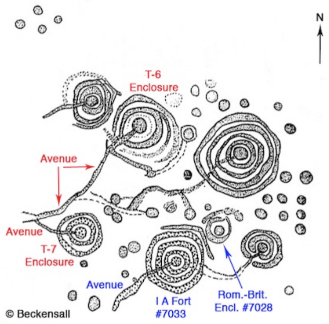
Based on the sites discussed herein and in ‘Petroglyphs: The Bend of the Boyne’, there appears to be no discernable pattern as to how far panels are located from the site, aside from a 2,000m radius. Case in point is HH Panel #1d which is located less than 150m from the area it depicts, as opposed to HH Panel #2, which is situated 1,500m away. In some cases this may simply be due to there being no outcroppings in the immediate vicinity of the site, though at Hunterheugh that's not the case. So there exists the distinct possibility that monuments closest to the panels, were the first to be constructed. If this is the case, then it would be another valuable 'tool' in determining the chronology of a site.

Given its location, one of the two double-ringed symbols on Midstead Panel #1 (#7008) likely depicts Enclosure #7023, which would mean it dates not to the Roman-British Period, but rather the Neolithic or Early Bronze Age. Interestingly, Midstead Panel #5 was found within the barrow field it likely depicts, Mon. #7057.

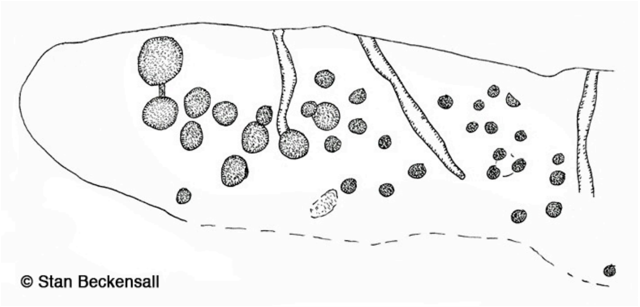


**Midstead Panels 1 & 5**

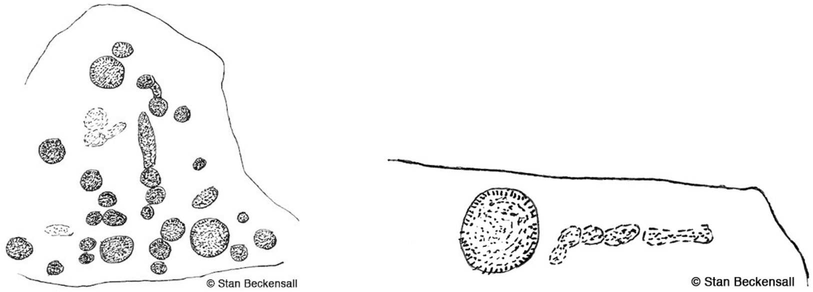
MS Panels #2, #3 & #4, in view of their location, probably depict the mounds seen on HH Panel #2 that surround the enclosures, though matching them to the features in the landscape would be impossible without extensive excavation.



**HH Panel 2**



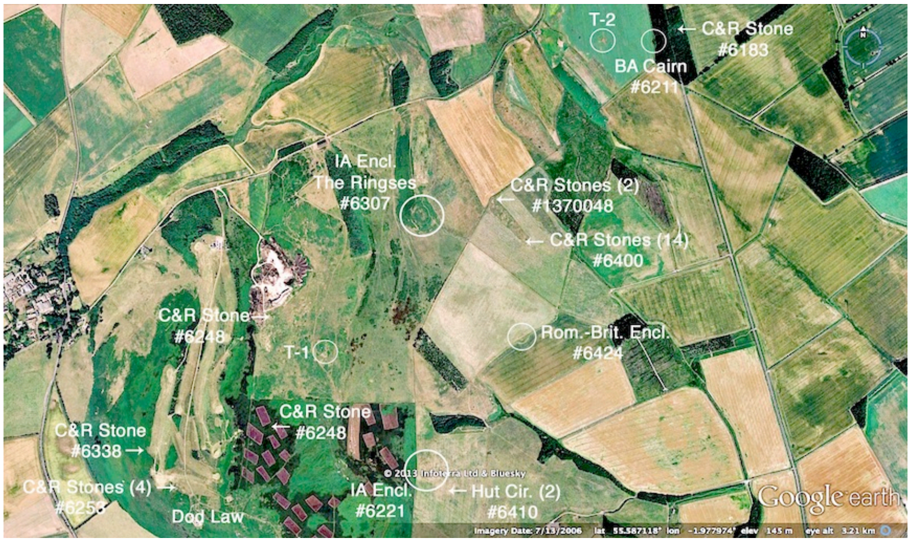
**Midstead Panel 2**



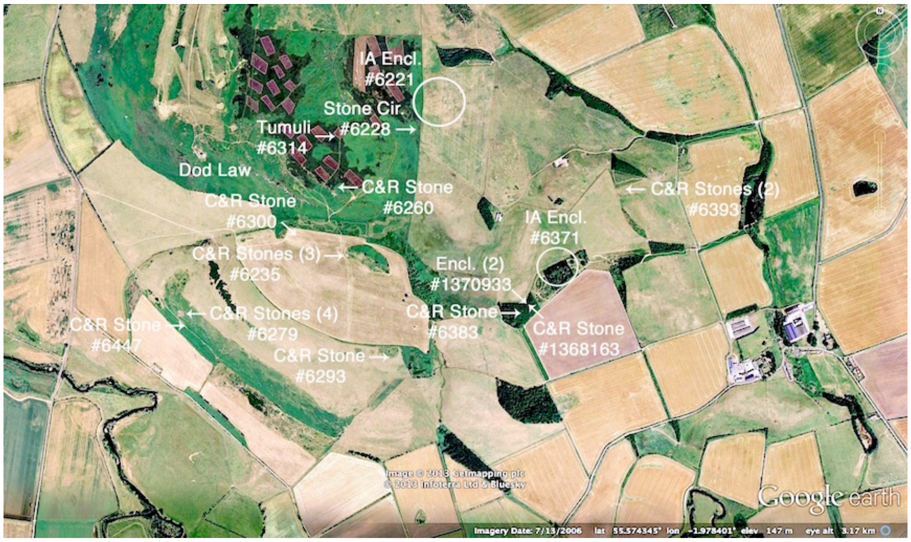
**Midstead Panels 3 & 4**

## Section 13: The Ringses & Dod Law, Northumberland

As in the case of Hunterheugh, based on the Neolithic or Early Bronze Age panels, most of the monuments within the site have been misidentified as belonging to the Iron or Roman-British Ages. The main monument 'The Ringses', (#6307) is described as consisting of four ramparts, and *"the remains of the semi-circular rampart… which may have formed an outer annexe",* as well as *"an elongated mound 0.5m high situated near the outer rampart of the main earthwork",* (English Heritage, e) all three of which are exactly what is depicted on Panel 1b, as recorded by Beckensall. (see drawings, page 101)

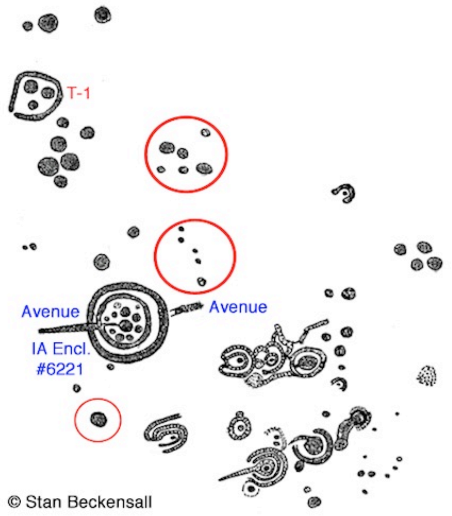


Aerial of The Ringses & Dod Law



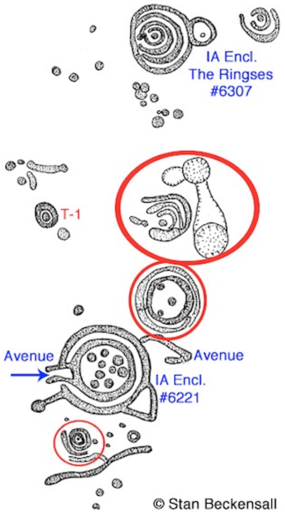
Aerial south of The Ringses & Dod Law

Considering that Panels 1a & 1b are adjacent to each other, and the motif consisting of several cups surrounded by two rings, with two opposing 'avenues', on both panels, Panel 1a is likely a much earlier depiction of the site. "*This fort was visited on 28th August 1924… it is circular in form, the diameter being about 120 yards, and is defended by a single earthen rampart which rises in parts 6ft above the trench; the entrance is to the south-east.*" However the report goes on to state that a drawing *"shows two ramparts or a rampart and ditch with an unidentified central feature* [mound]*." "The alleged tumulus is an elongated mound of earth and stones oriented NE-SW and measuring 12.0 m x 9.0 m x 0.4 m high, and its position is the only factor in favour of its being sepulchral."* (English Heritage, f) The reason for the discrepancy of whether it consisted of one or two ramparts, and that only one mound was recorded, is that the site has been plowed out. (see images below and following page)



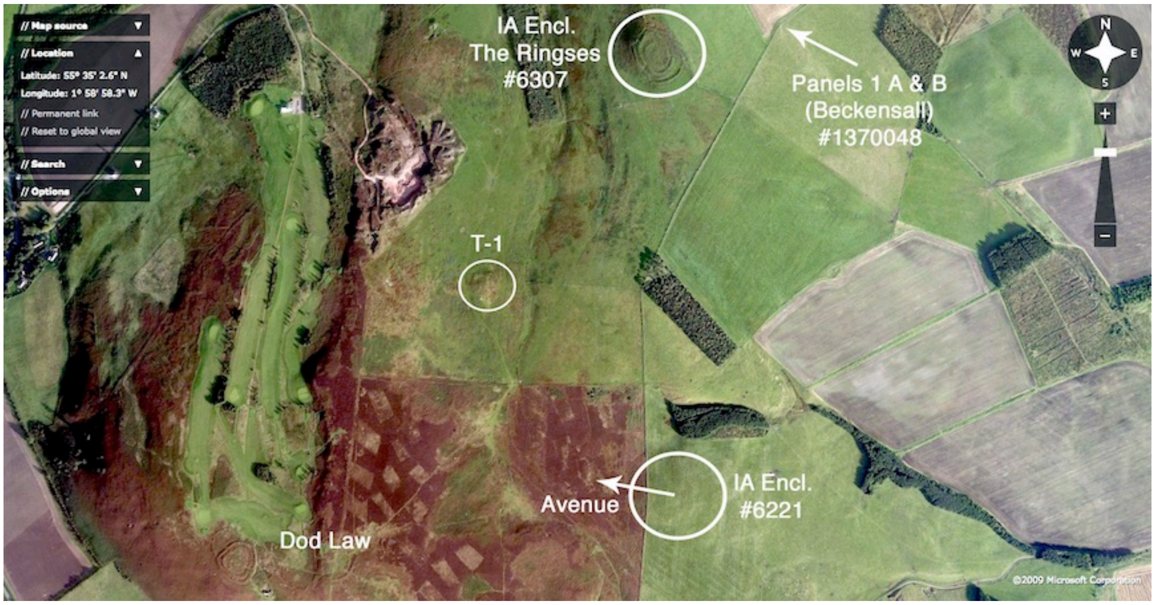
© Stan Beckensall

**Panel 1a**



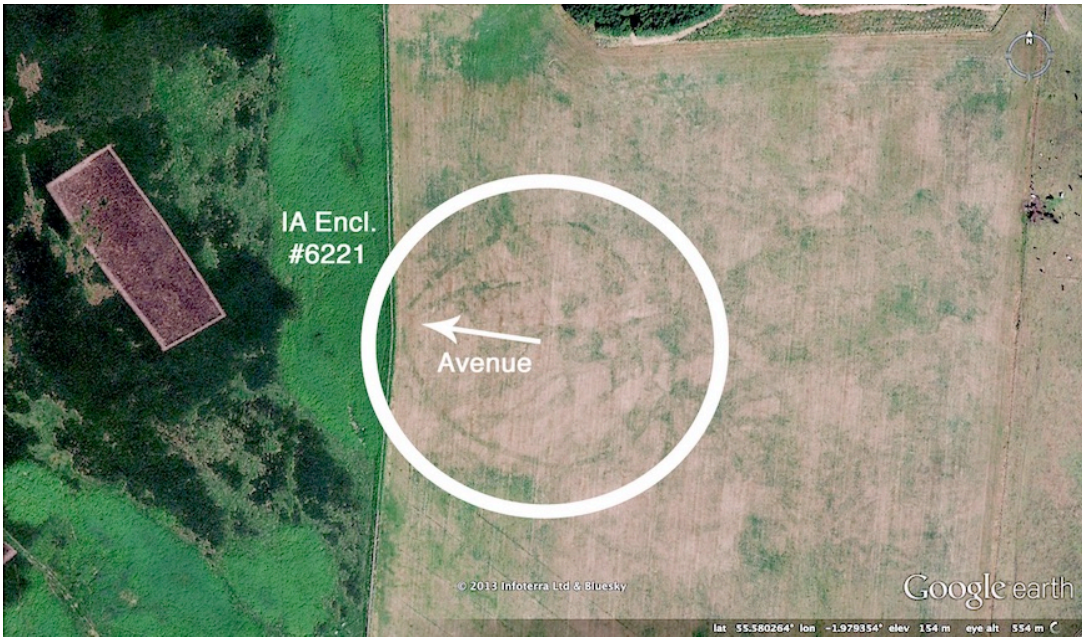
© Stan Beckensall

**Panel 1b**

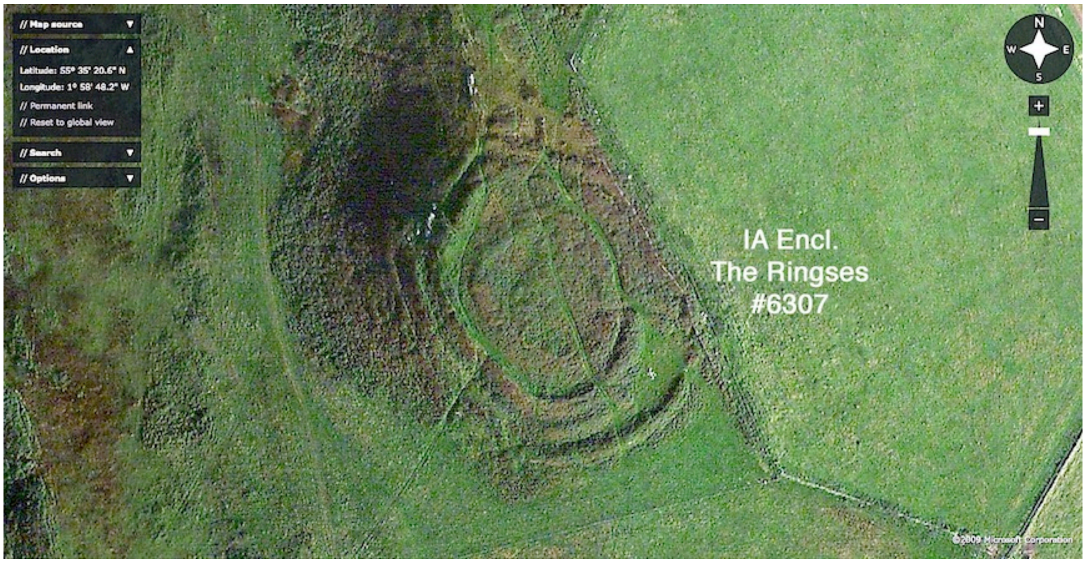


©2009 Microsoft Corporation

**Aerial of area depicted on Panels 1a & 1b**


IA Encl.
#6221
Avenue
© 2013 Infoterra Ltd & Bluesky
Google earth
lat 55.580264° lon -1.979354° elev 154 m eye alt 554 m

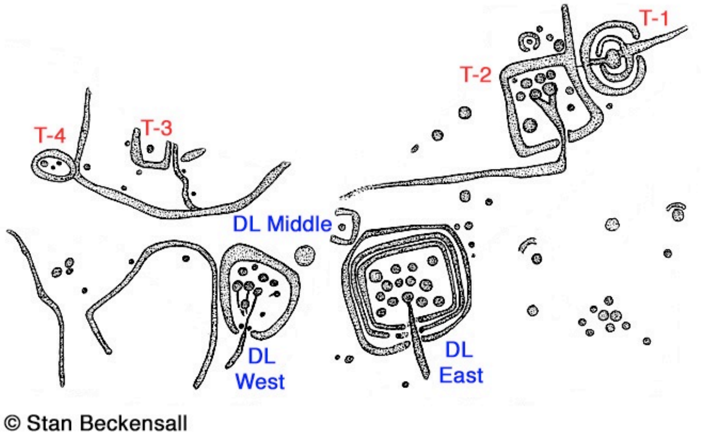
**Aerial of Enclosure (#6221)**



Latitude: 55° 35' 20.6" N
Longitude: 1° 58' 48.2" W

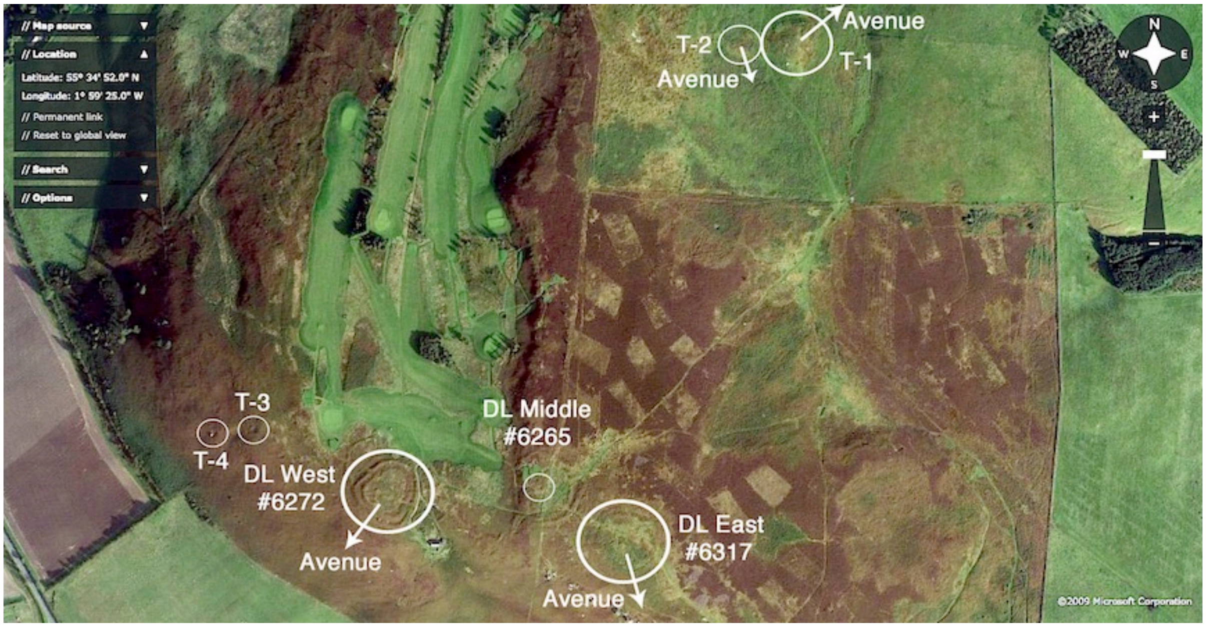
**Aerial of The Ringses (#6307)**

Panels 1a & 1b are perfect examples of not only the evolution of the site, with the addition of 'The Ringses', (#6307) but of the monuments themselves. (note areas highlighted in red) As the grouping of mounds and ringed enclosures to the right of the main enclosure (#6221) are not depicted, this likely was not due to 'artists choice', but probably indicates those monuments had by the time the 'map' on Panel 1b was carved, had fallen into disuse, which means a significant period of time had elapsed. As mentioned in Section 8, there is one monument that Panels 1a & 1b, share with the Main Panel at Dod Law, that being monument T-1. (see drawing & photo on following page)



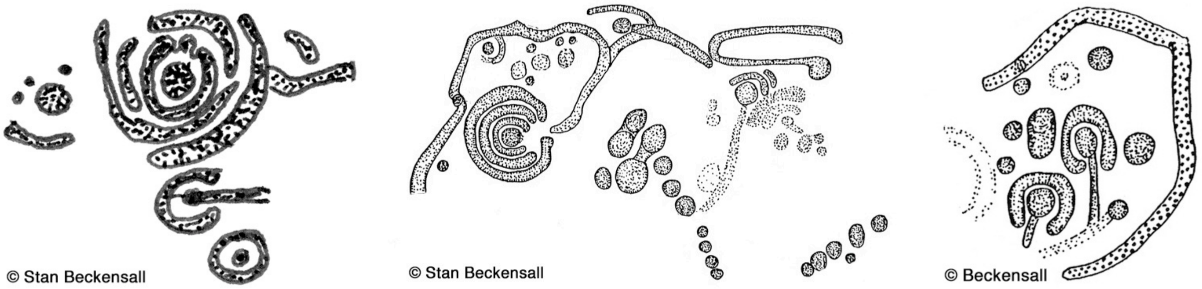
© Stan Beckensall

**Main panel at Dod Law**



**Aerial of area depicted on the main panel, Dod Law**

Three of the other panels found within the site are shown below, though none at this point can be matched to any monuments and/or features in the landscape, and none appear to be earlier depictions of the aforementioned monuments.



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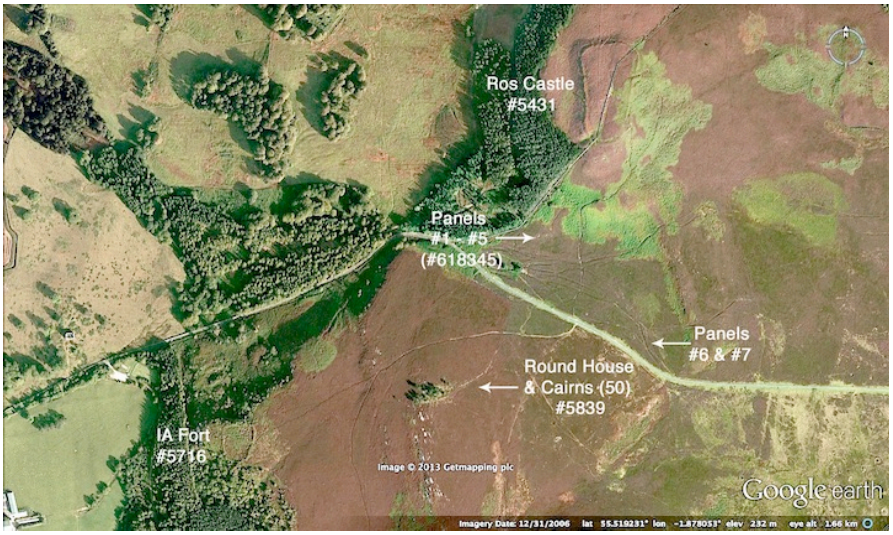
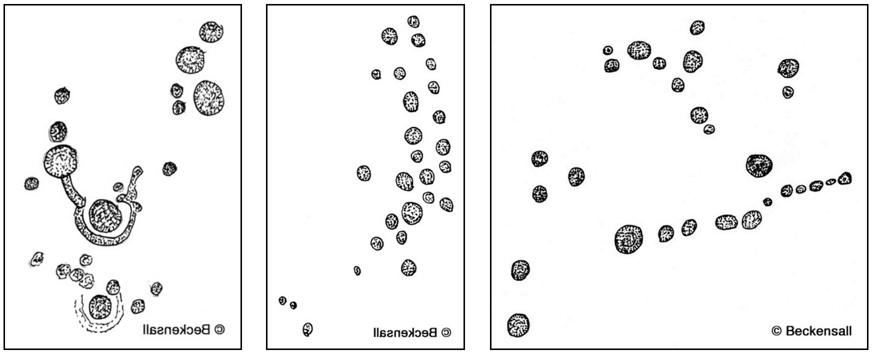
**Panels 4b, 6b & 7**

## Section 14: Ros Castle, Northumberland

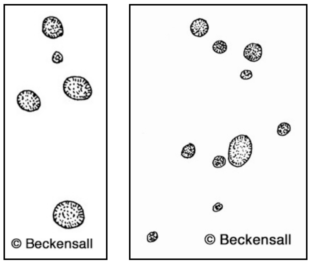
The one panel described by English Heritage, (#618345) does not correspond to any of the seven recorded by Beckensall, who comments, *"The motifs are simple, which again may mean something, such as being in a subsidiary role to some now-destroyed monument..."* (English Heritage, g) The monument(s) to which he alludes, is a *"prehistoric unenclosed round house and associated banks and cairns… The plot is situated within a cairn field containing at least 50 clearance cairns."* (English Heritage, h) However, the mounds are not clearance cairns, but funerary cairns. It should be noted that Panels #2 & #7 consist of a single cup mark each.



Aerial of Ros Castle



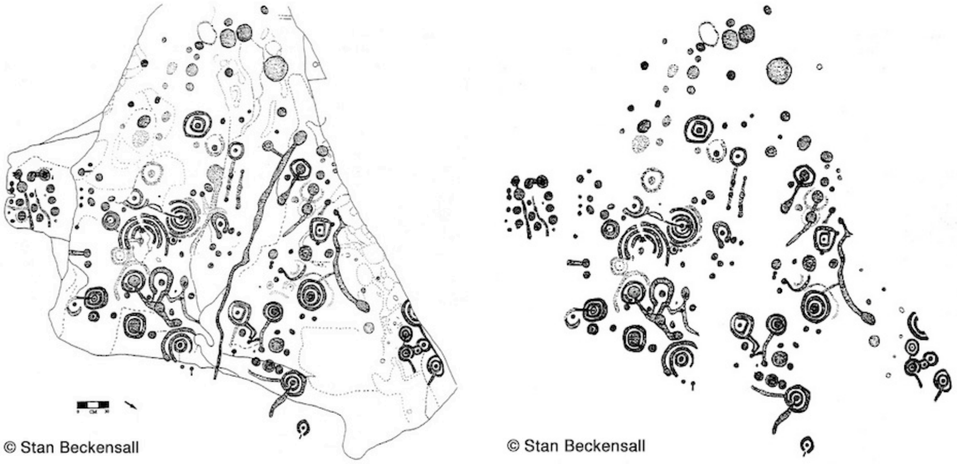
Panels 1, 3 & 5



Panels 4 & 6

## Section 15: Lordenshaws, Northumberland

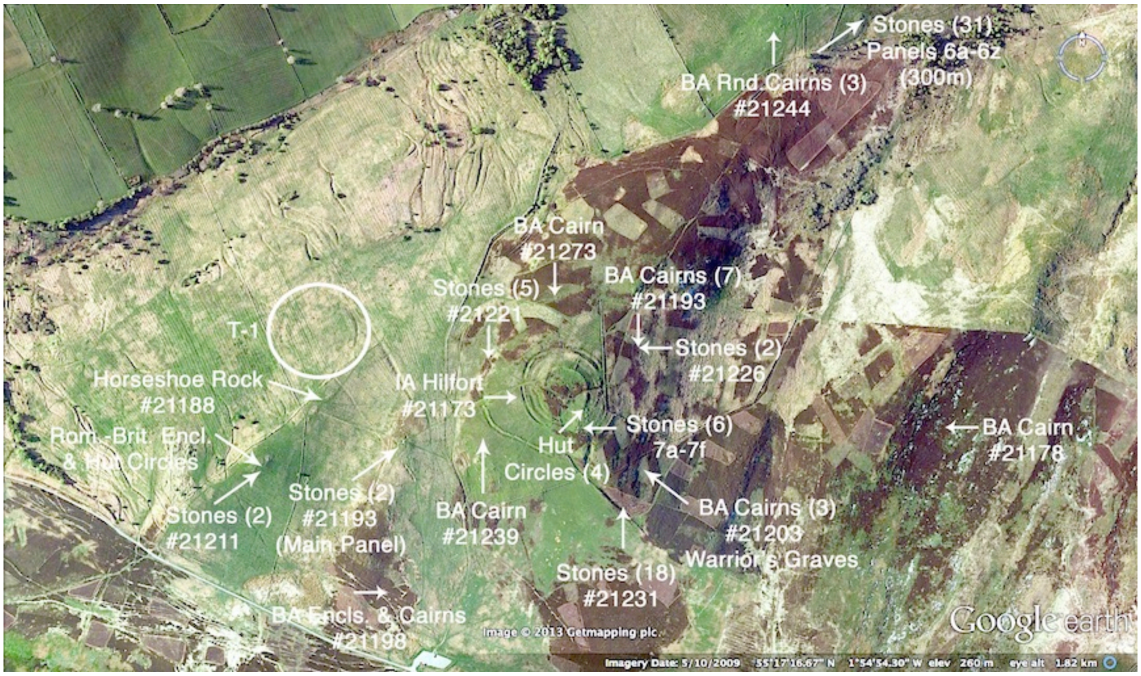
The hillfort at Lordenshaws, which has only been partially excavated, is described as being of Iron Age date. (English Heritage, i) However, in view of the sheer number of Bronze Age enclosures and cairns surrounding the fort, not to mention the 100 panels of petroglyphs recorded by Beckensall, it more likely dates to the Neolithic or Early Bronze Age. If in fact the fort dated to the Iron Age, it would mean that the most prominent site on the hill remained unused for a period of 1,000 to 2,000 years, which is extremely implausible. Of the 100 panels, Panel 2c, (#21193) given its location, likely depicts the enclosure and those enclosures and cairns surrounding it.



© Stan Beckensall

© Stan Beckensall

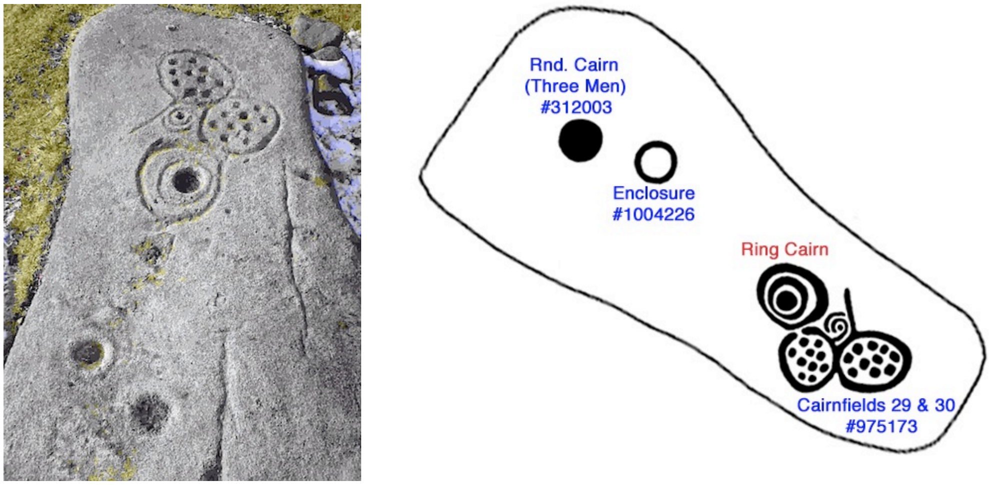
**Panel 2c, the Main Panel (#21193), Lordenshaws**



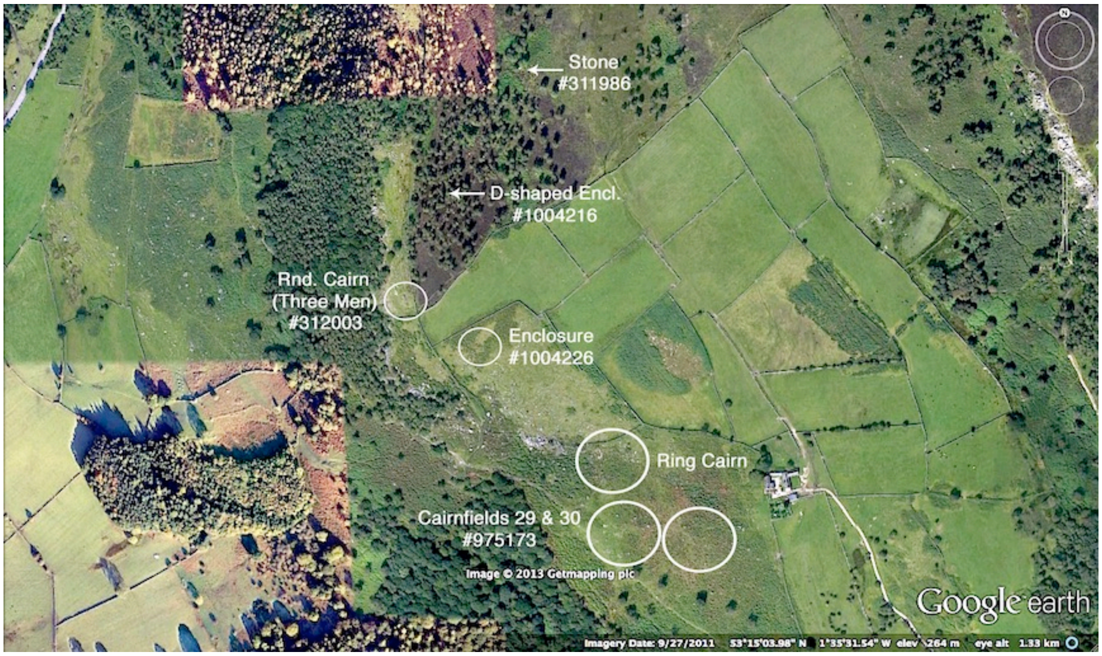
**Aerial of Lordenshaws**

## Section 16: Gardom’s Edge, Derbyshire

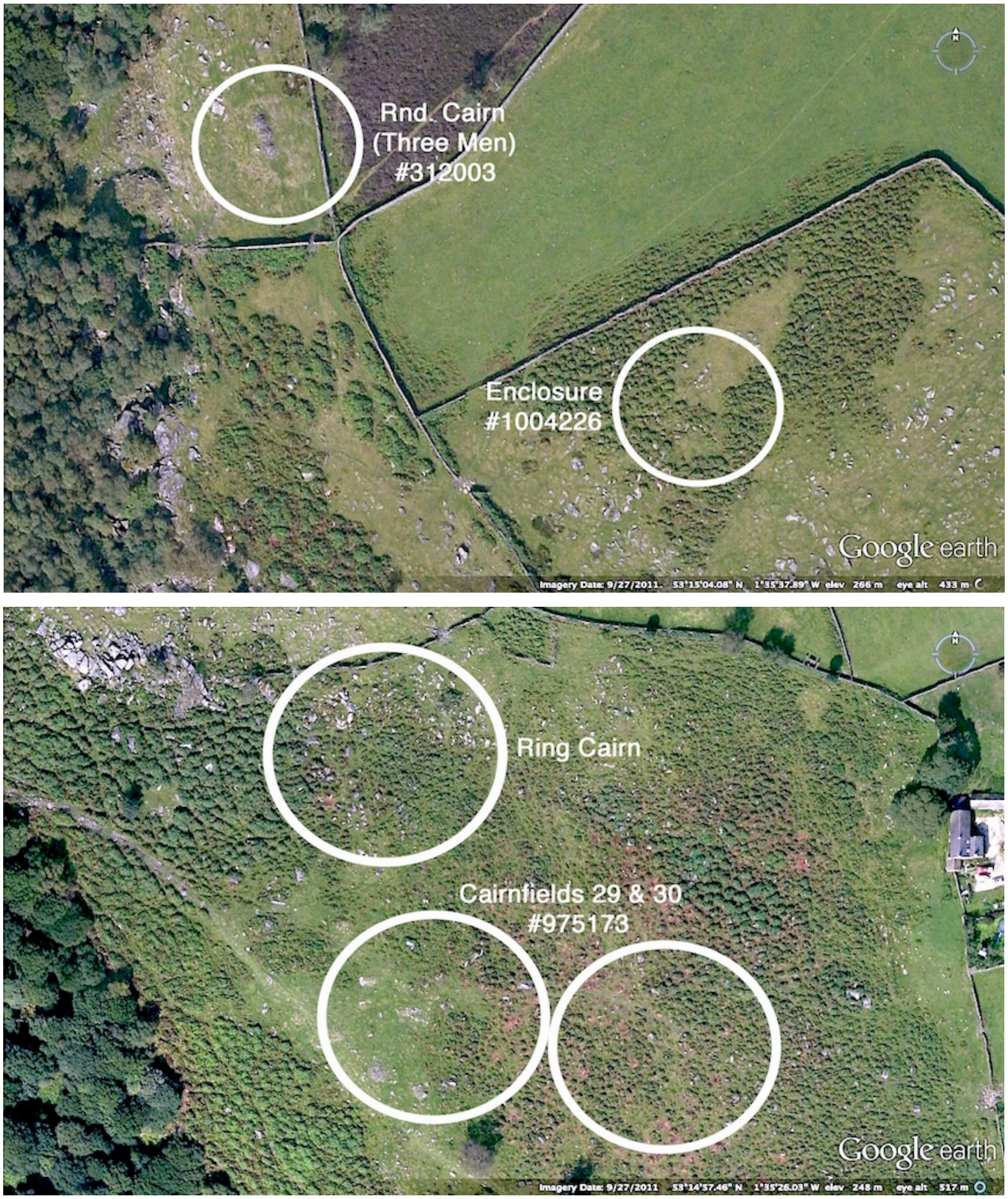
*"Recent research suggests that many [panels] are associated with the fringes of uplands and with important paths of access between lower and higher ground. On occasion, they seem to line the route towards important monument complexes."* (GardWeb, 2002) That being said, it’s the panels which dictated the route(s). The panel at Gardom’s Edge, which likely depicts an early phase of the site, is a perfect example, with the symbols arranged so that upon approaching the site from the north, the first monument depicted on the panel one would encounter is a round cairn, the 'Three Men'. As the D-shaped Enclosure (#1004216) is not depicted, it was constructed during a later phase of the site.



**Gardom’s Edge panel**



**Aerial of area depicted on panel, Gardom’s Edge**


Rnd. Cairn
(Three Men)
#312003
Enclosure
#1004226
Google earth
Imagery Date: 9/27/2011 53°15'04.08" N 1°35'37.89" W elev 266 m eye alt 433 m
Ring Cairn
Cairnfields 29 & 30
#975173
Google earth
Imagery Date: 9/27/2011 53°14'57.46" N 1°35'26.03" W elev 248 m eye alt 517 m

**Aerial close-ups of areas depicted on Gardom's Edge panel**

With respect to the 'Three Men', it's described as being a *"Large round cairn surmounted by three modern cairns... The three abutting cairns are memorial cairns known as the "Three Men of Gardom's" or the "Three Men".* (English Heritage, j)

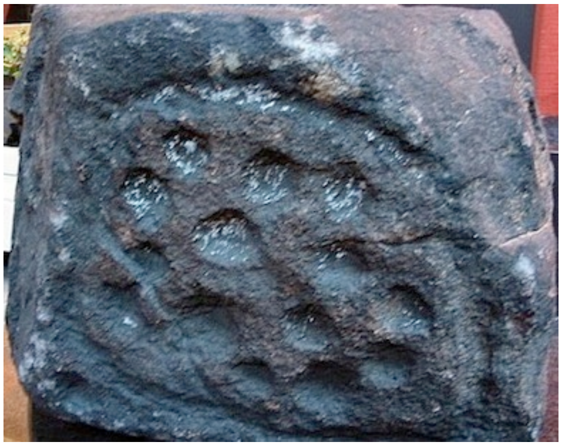
As for Monument #975173, *"Field clearance banks and cairns identified in the southern area of Gardom's Edge. Surveys by Barnatt grouped the features as cairnfield 29 and cairnfield 30. Cairnfield 29 comprised scattered areas of field clearance within the vicinity of Moorside farm.*

*Cairnfield 30 comprised two areas of possible prehistoric clearance. The northern part contained 16 cairns and three sub divided areas. The southern part contained up to eight cairns...".* (English Heritage, k) While there are only 10 cups within each of the two depicted 'enclosures', that's no doubt due to the fact that no more could be added to the panel, which indicates the additional cairns were constructed at a later date.

At first glance the symbol depicting monument #1004226, appears to be simply a cup, however, upon closer examination the symbol has a 'raised lip', unlike that depicting the 'Three Men', indicating the symbol depicts an enclosure. *"The site comprised a break of slope with earthfasts which was 0.3 metres high with cleared land above and below it. It was not clear whether this was a plot or yard boundary. This feature was central to an area at the inner edge of the bank of an enclosure..."* . (English Heritage, l)

It should be noted that in 1996 the stone bearing the main panel was reburied in situ to prevent further 'decay', and replaced with a fiberglass replica. However, in a British Archaeology article dated July 1996, archaeologist Stan Beckensall commented that *"he felt some sympathy for the view that rock art should be allowed to 'decay gracefully' - that it 'exists in time' and that its value lies precisely in the fact that it has survived for millennia despite all processes of erosion."* (Denison, 1996) The true value of the panels are that they're the only surviving 'historical records' from the Neolithic or Early Bronze Age, by which it's possible to identify heretofore unknown sites and monuments, as well as determine their evolution. Allowing the panels to "decay gracefully" would be as irresponsible as allowing 'The Rosetta Stone', 'The Dead Sea Scrolls' or 'The Book of Kells' to decay gracefully.

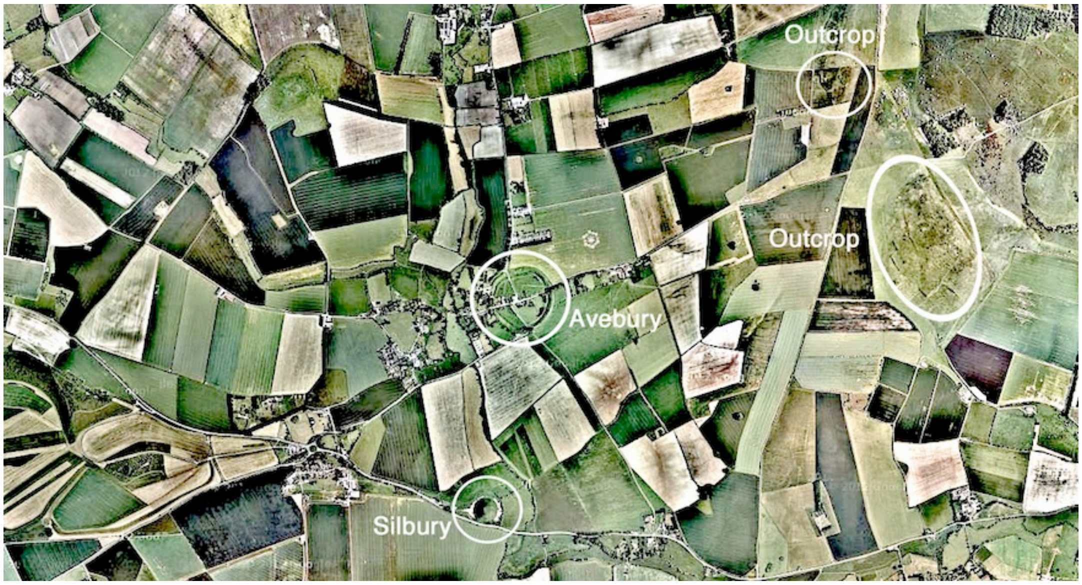
Given its D-shape containing fourteen (14) cups, a second panel, which now resides in Sheffield's Weston Park Museum, likely depicts the D-shaped enclosure (#1004216) located adjacent to the 'Three Men'. "*…the enclosure probably belongs to the Neolithic or Early Bronze Age period… and was formed by a discontinuous stone bank normally 6 – 9m across, running 610m round the eastern side of the escarpment… Much of the interior is boulder strewn, but there are less stony areas to the NE and S. A large burial cairn, lies in the southern part of the enclosure. Its relationship with various elements of the field system suggest that it is earlier than, or contemporary with the field system. The cairn may therefore, have a direct locational or functional association with the scarp-edge enclosure."* (English Heritage, m) In view of the presence of the large burial cairn, the boulders strewn about the interior in all probability represent the remains of the other 13 cairns depicted on the panel.



**Panel at Weston Park Museum**

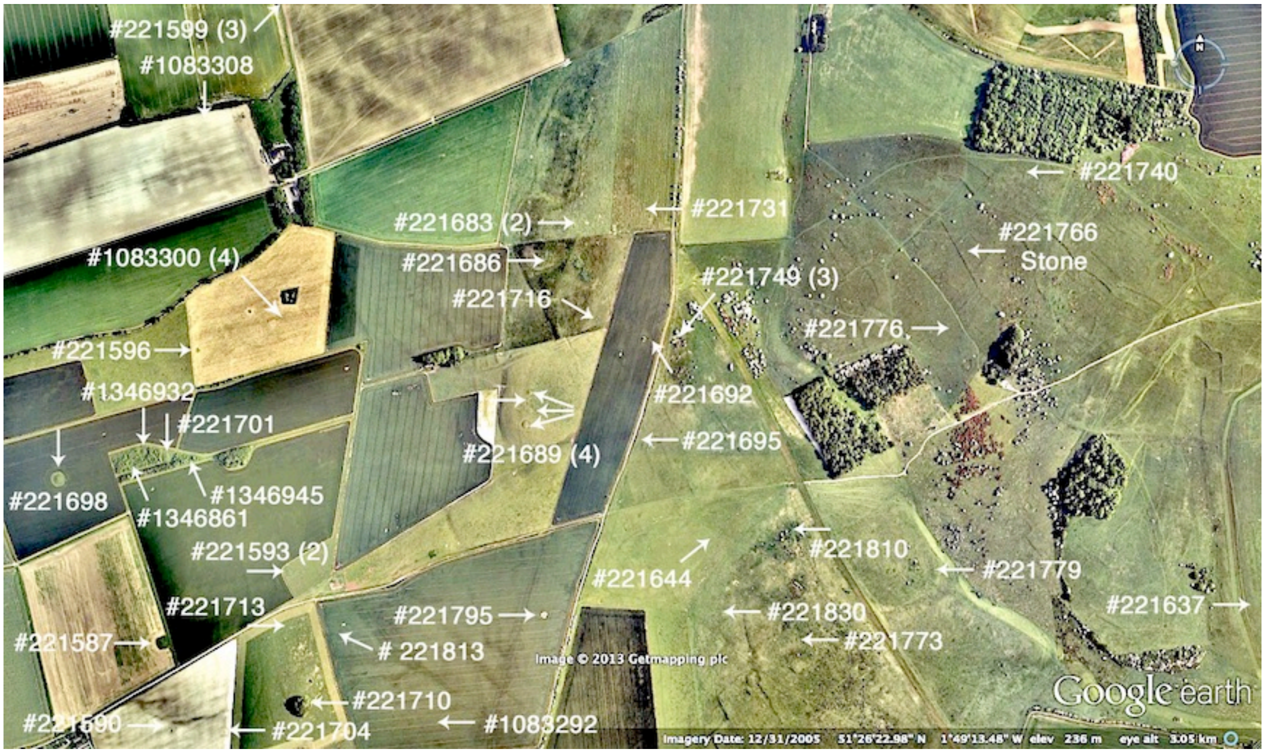
### Section 17: Avebury, Fyfield Down, West Overton & Winterbourne Monkton, Wiltshire

It was suggested in 'Petroglyphs: The Bend of the Boyne' (Section 21) that *"Just as panels can identify nearby unknown sites, conversely sites themselves where no panels have been discovered, are likely indicators of panels located in outcroppings within a 2,000m radius. One of the most notable sites in England is the Avebury Henge and its environs, which includes a numerous variety of Neolithic and Early Bronze Age monuments. Considering the importance and sheer size of the site, it stands to reason that the builders would have kept 'maps' as the site evolved."* (Moriarty, 2010)



**Aerial of Avebury showing the two suggested outcroppings**

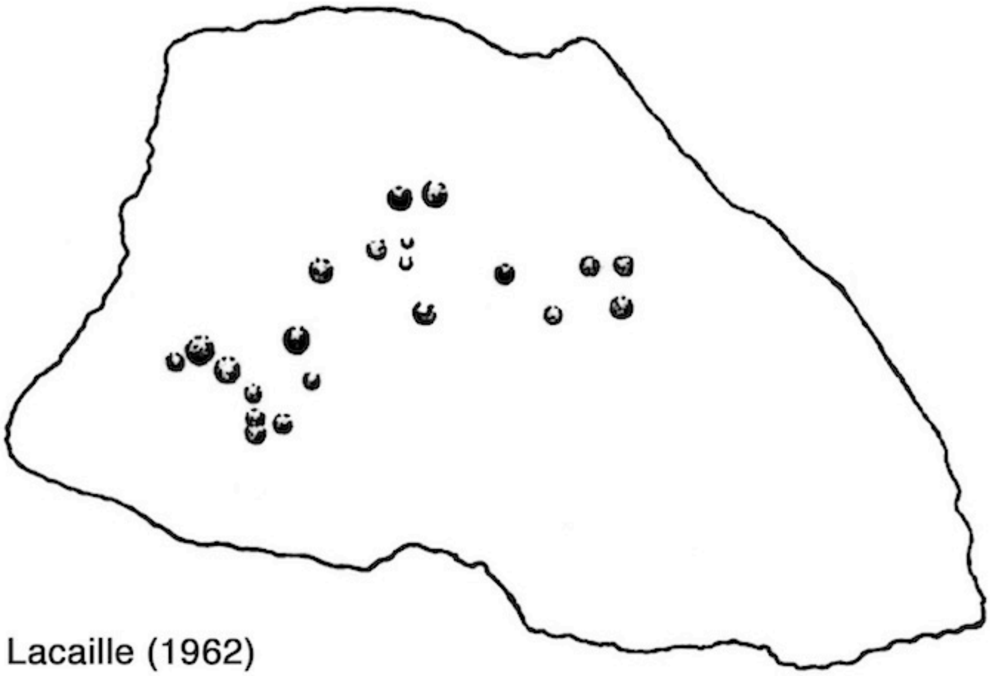
Upon searching the English Heritage archives, there is in fact one panel which was recorded by Lacaille in 1962. Though the panel is located 3,530m northeast of Avebury, it's within 900m of the two areas suggested that a panel would be located. The monuments the panel likely depicts, have been recorded as being part of the Avebury, Fyfield Down, West Overton and Winterbourne Monkton Groups, consisting of bowl, bell, pillow, pond and round barrows belonging to the Early Bronze Age. For example, Monument #221692 was listed by Grinsell as Avebury 44, while #221749, just 50m west, is recorded as West Overton 9a, b, & c, with #221731, 330m north, as Winterbourne Monkton 17c.



**Aerial showing the barrows according to their monument numbers**

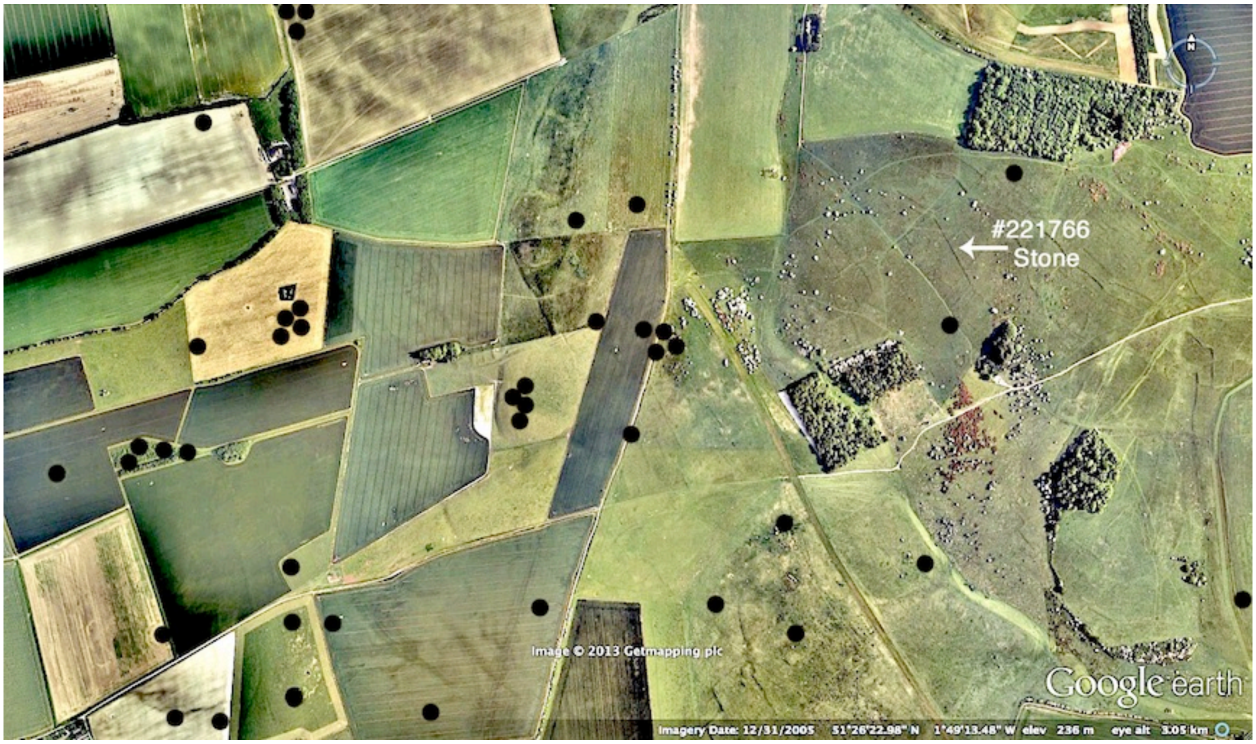
Given the numerous Mesolithic and Neolithic artifacts found within the immediate vicinity, suggests that these mounds date not to the Early Bronze Age, but rather to the Late Mesolithic and Early Neolithic.

As discussed in 'Petroglyphs: The Bend of the Boyne', mounds/barrows are depicted as cups, in this case twenty-one (21) of them. As there are over forty (40) barrows found within the area, it's impossible to determine which are depicted on the panel, and those that were constructed subsequent to the panel being carved. The fact that the latter monuments were not added to the panel, would seem to indicate they were constructed well-after the initial twenty-one (21) were carved, or that the practice of carving panels had by that time been discontinued.



Lacaille (1962)

**Fyfield panel**

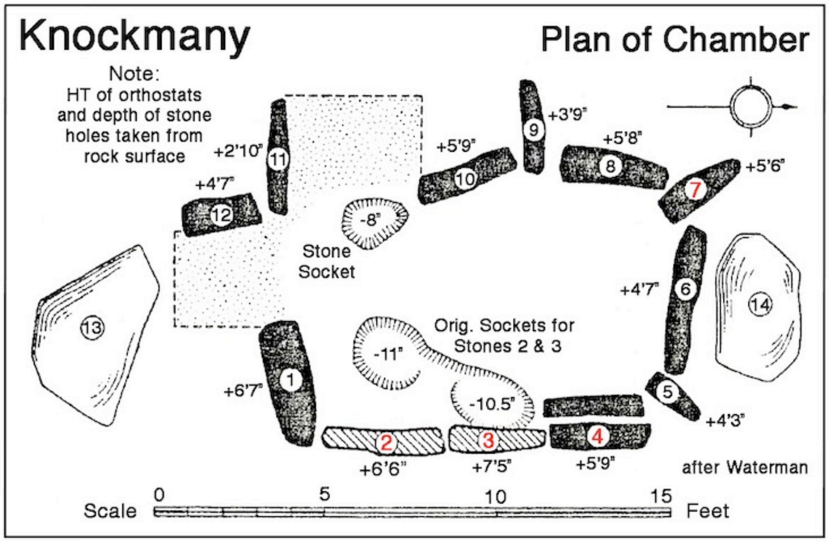

#221766
Stone
Image © 2013 Getmapping plc
Google earth
Imagery Date: 12/31/2005 51°26'22.98" N 1°49'13.48" W elev 236 m eye alt 3.05 km

**Aerial showing the location of the barrows, Fyfield**

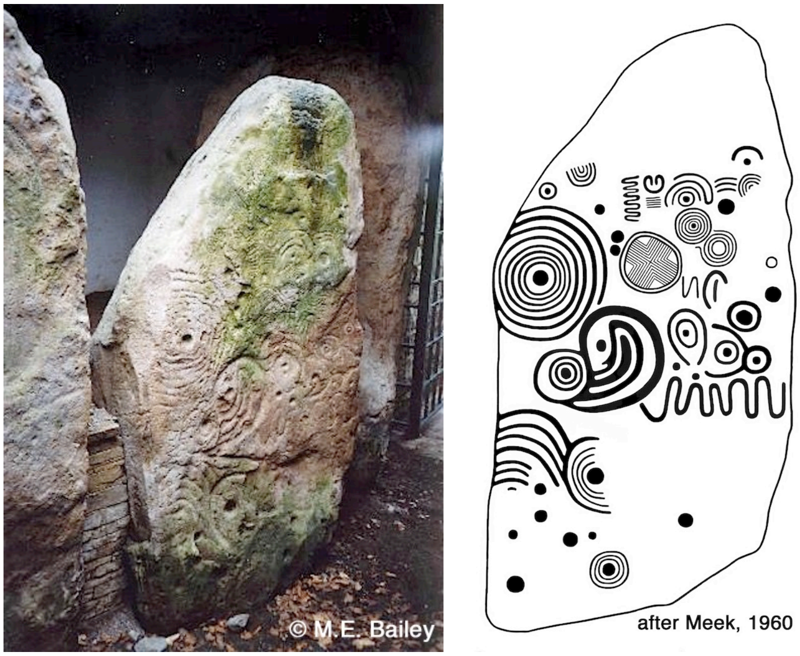
# Northern Ireland

## Section 18: Knockmany, County Tyrone

Though the monument at Knockmany, locally referred to as Annia's Cove, is listed as being a passage cairn, there have been few remains recovered and no defined passageway. There are a number of stones with carvings, 2, 3, 4 & 7. The panel on Stone 2 is the most significant, as it depicts the entire site, in particular Knockmany, which initially consisted of a mound and two ramparts. (#6 on illustration and aerial, page 113)

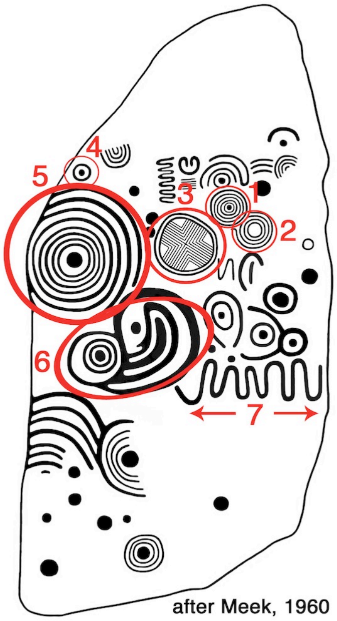


after Waterman

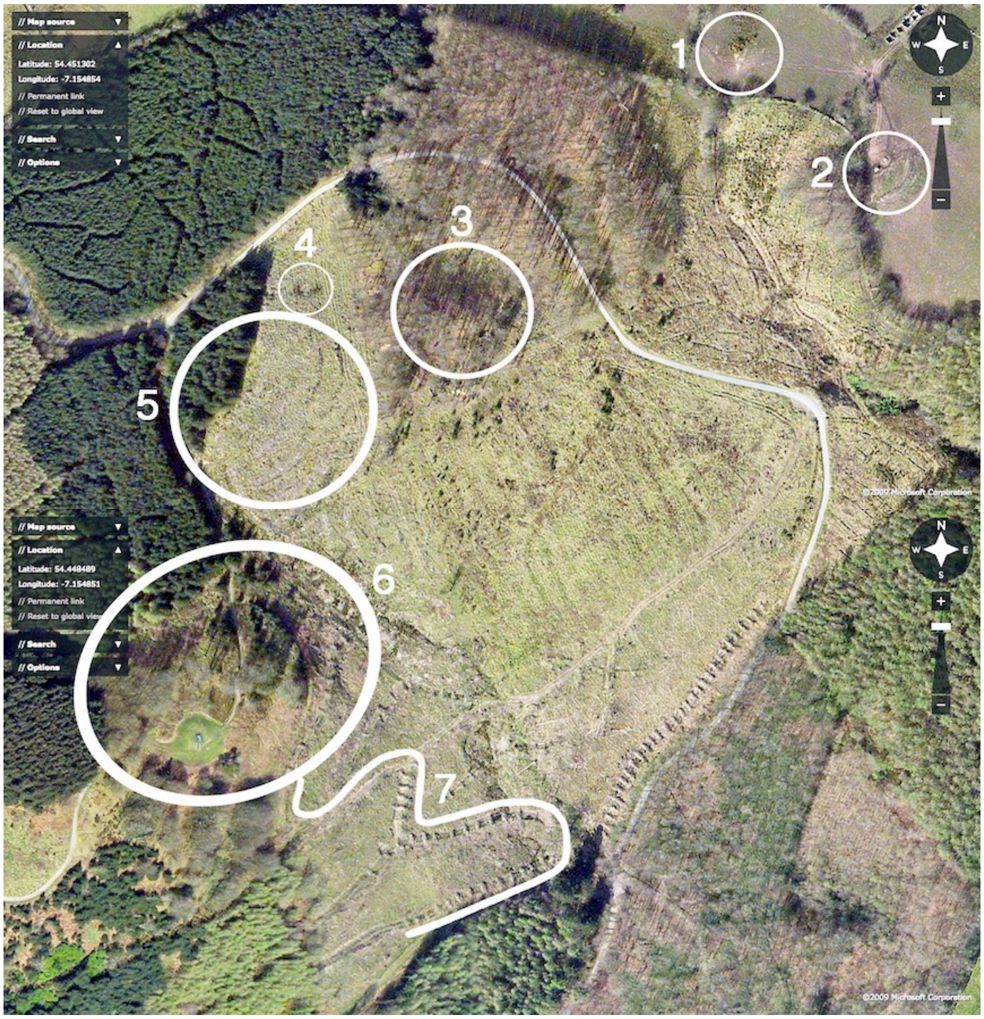


after Meek, 1960

Stone 2, Knockmany



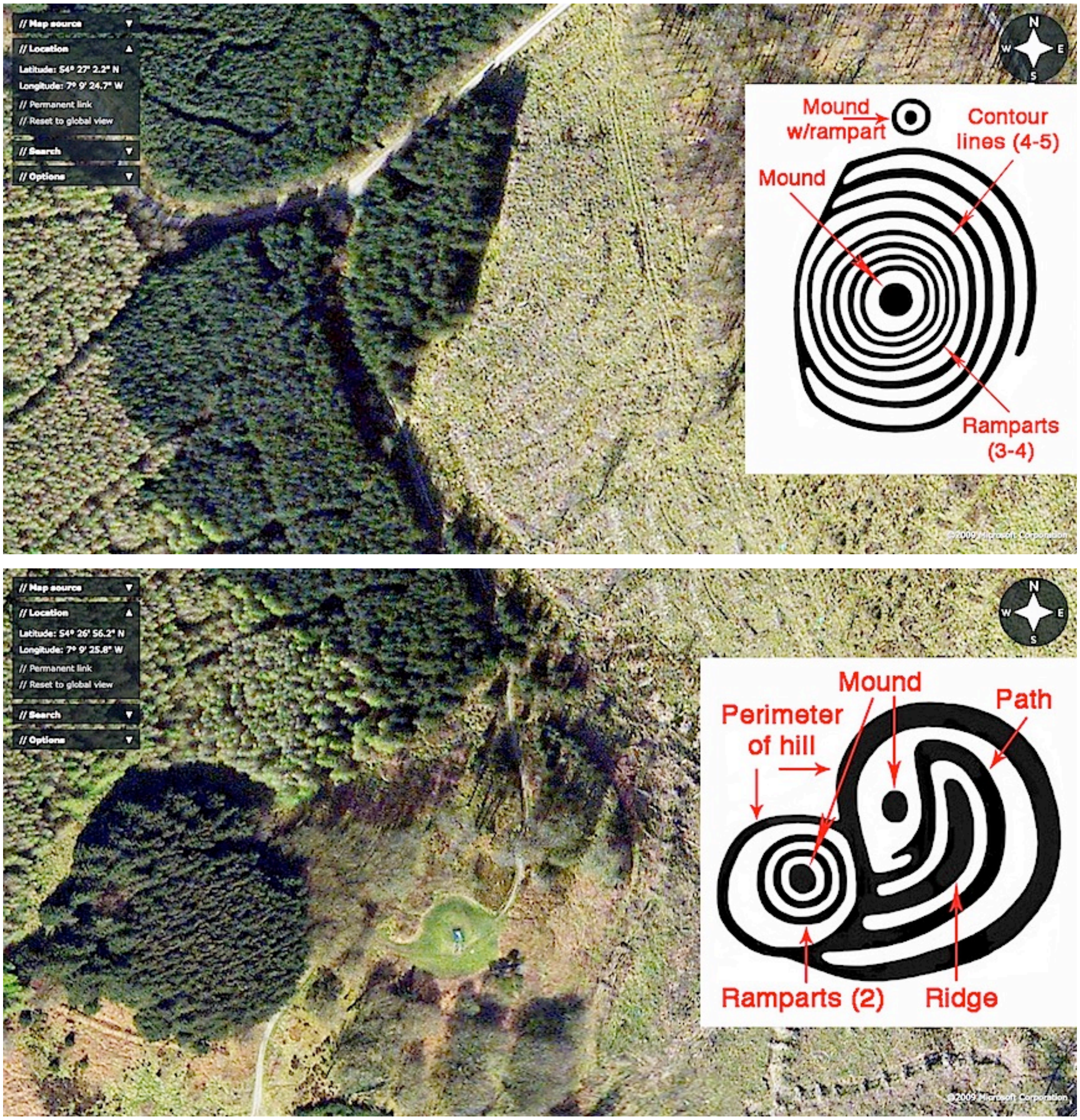
after Meek, 1960



Latitude: 54.451302
Longitude: -7.154854

Latitude: 54.448489
Longitude: -7.154851

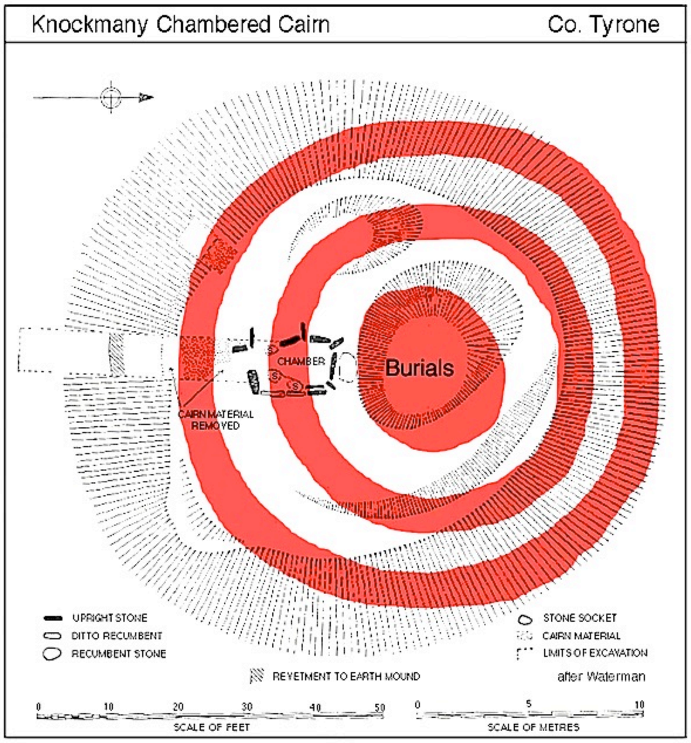
Aerial composite of Knockmany

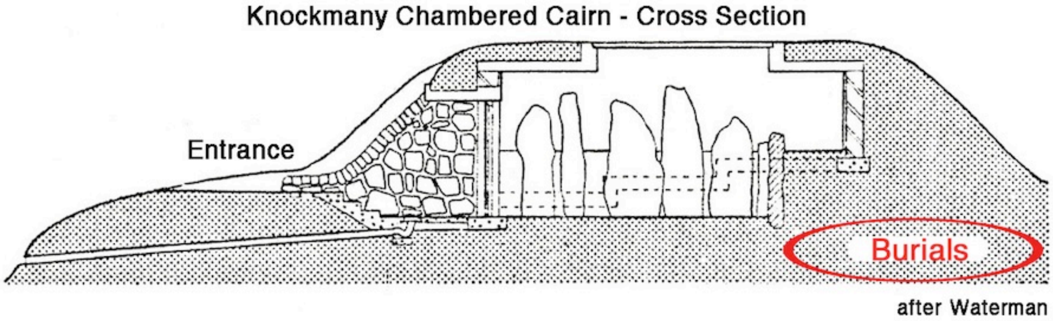


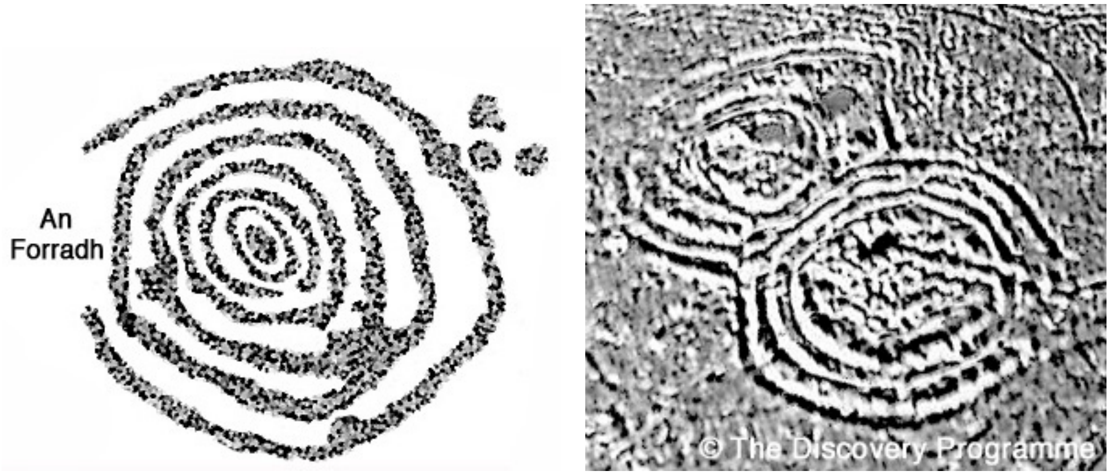
**Aerial close-ups & symbols of Areas 5 & 6**

Located at an elevation of 214m, Area #5 would have been visible from the passage cairn, at an elevation of 224m.

At some point, an ‘avenue’ was cut into the ramparts of Knockmany, and the stones set in front of the burial mound, so any burials are behind the chamber. There are two reasons for suggesting this. First, that An Forradh at the Hill of Tara, originally consisted of a mound and six ramparts, to which an ‘avenue’ was later added. Secondly, the remains found surrounding the chamber within the Mound of the Hostages at Tara.



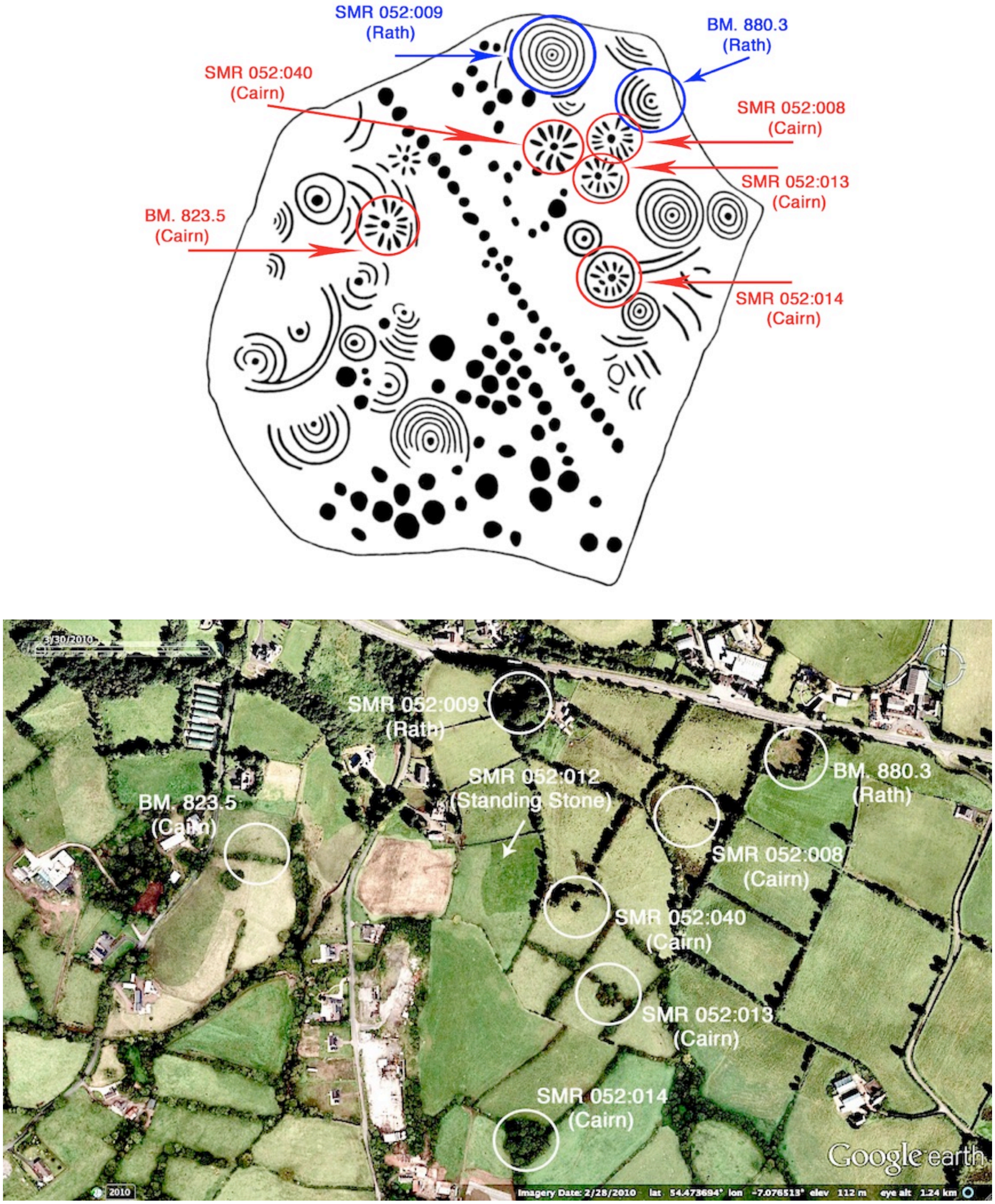




**Drawing of An Forradh from panel on L.2 with the Mound of the Hostages, Tara (L) and Mag Grad image of An Forradh (R) (upper left monument)**

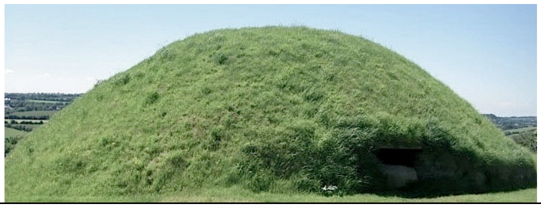
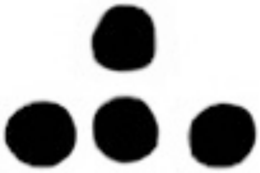
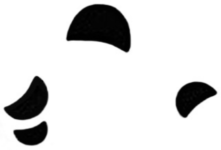
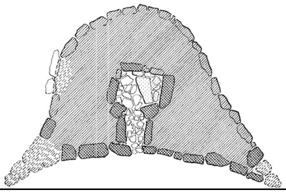
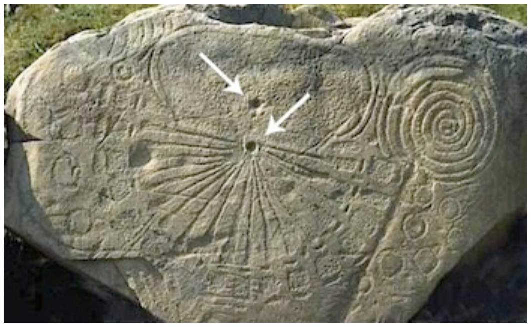
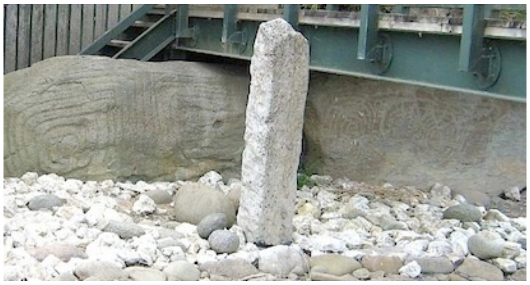
## Section 19: Sess Kilgreen, County Tyrone

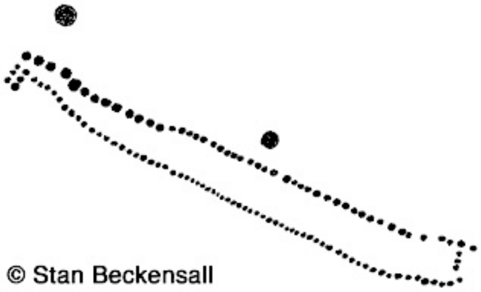
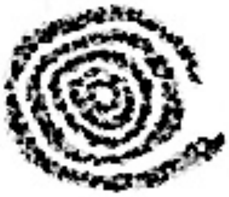
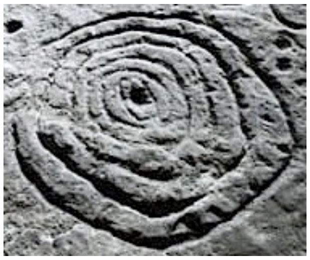
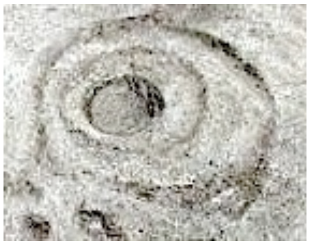
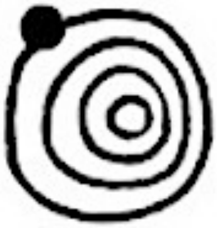
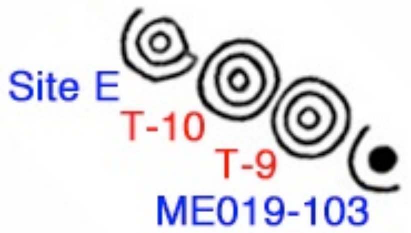
Roughly 7.5km ENE of Knockmany lies Sess Kilgreen, where a standing stone (SMR 052:012) depicts the site as it existed during the Neolithic or Early Bronze Age.

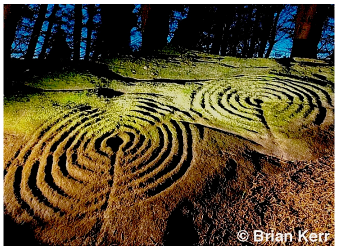
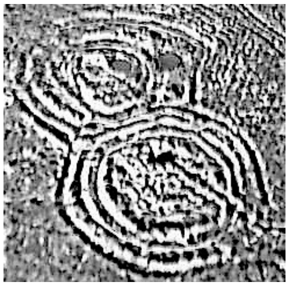
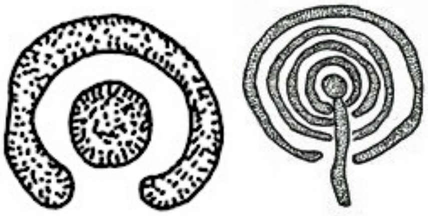
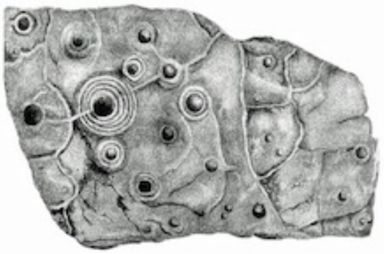
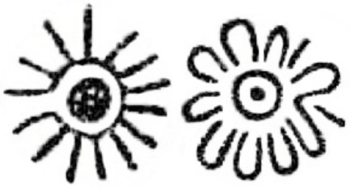
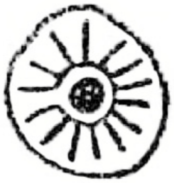
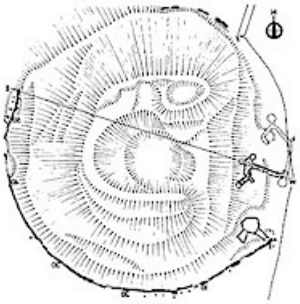


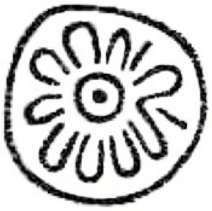
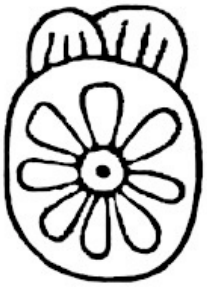
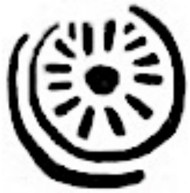
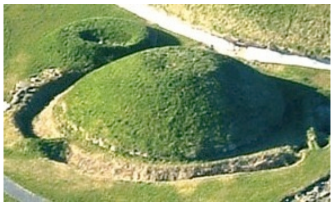
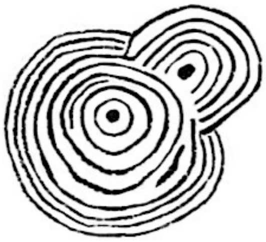
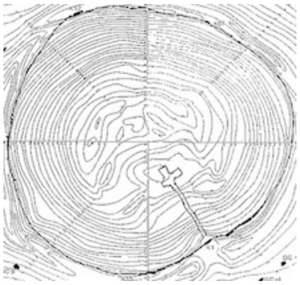
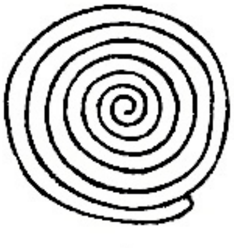
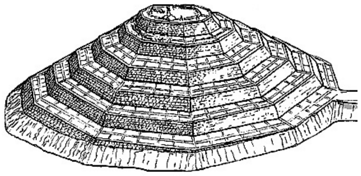
**Panel on standing stone & Aerial of Sess Kilgreen**

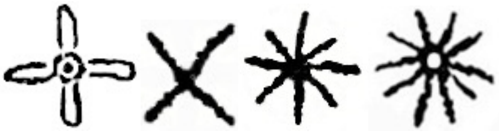
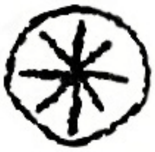
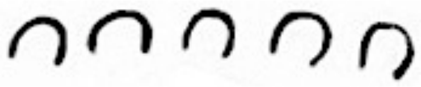
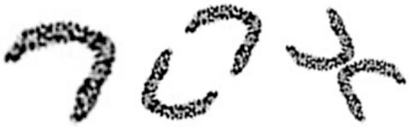
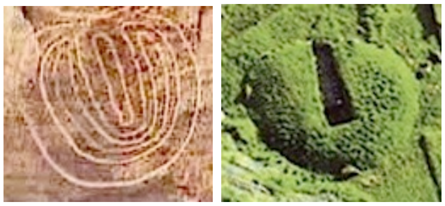
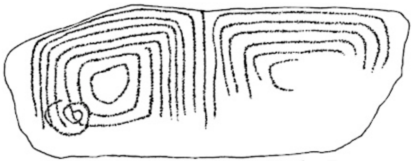
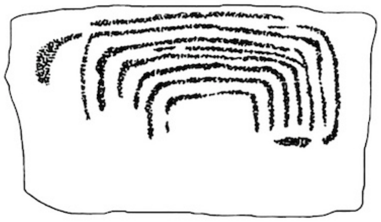
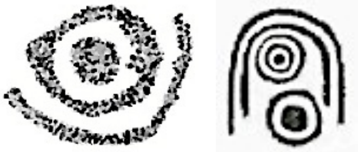
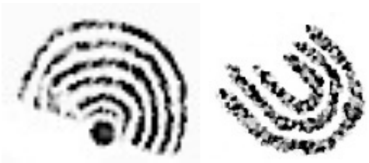
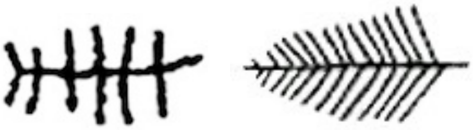
## Glossary of Symbols

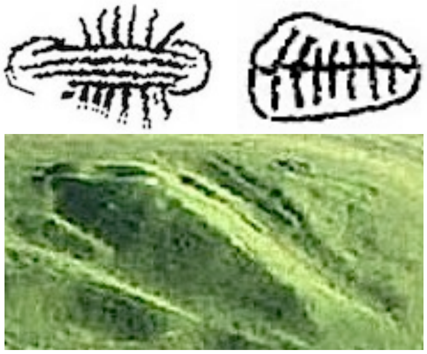
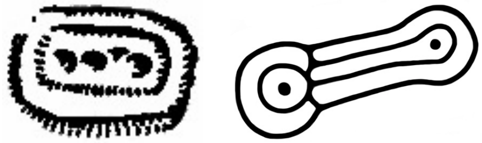
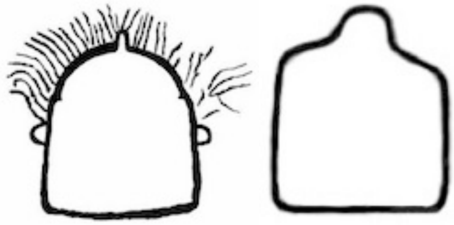
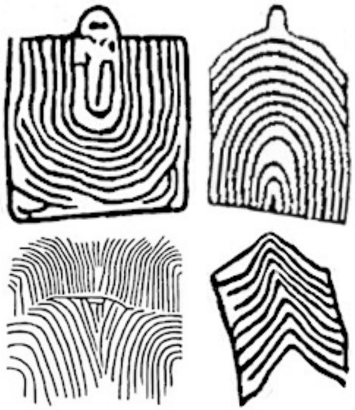
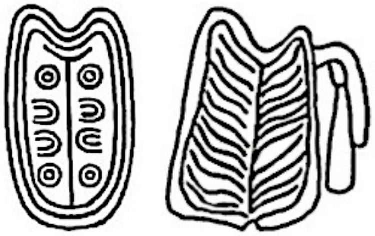
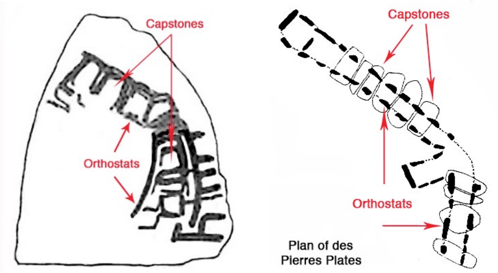
| Description | Symbol and/or Image | Depicts |
|---|---|---|
| Cup<br>(circular depression) | <br> <br> | Small mound or burial cist/pit |
| Cup<br>(elongated) | | Oval barrow |
| Line of cups with one possibly offset |  | Linear barrow cemetery |
| Crescents | <br> | Heel-shaped cairn<br>(Insert from Blackshaw Stone & Plan of Islesburgh, Scotland) |
| Cup(s) | <br> | Standing stone(s) or gnomon(s) |

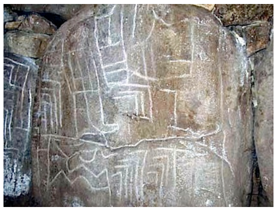
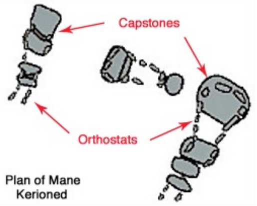
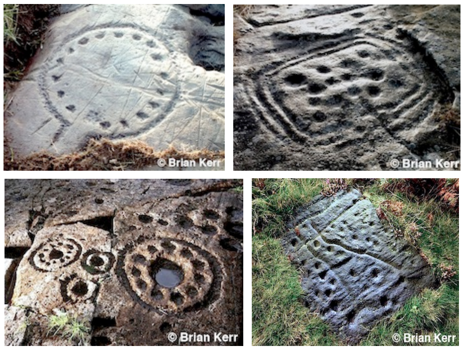
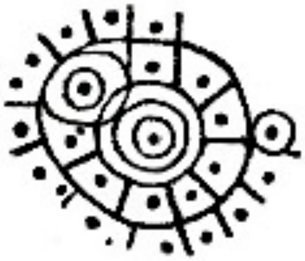
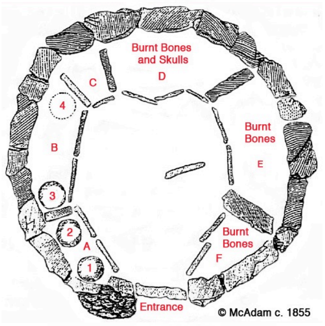
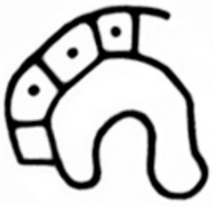
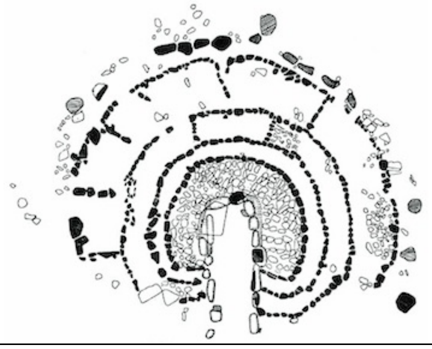
| | | |
|---|---|---|
| Row(s) of cups |  | Row(s) of small barrows or cists |
| Ring | | Stone enclosure with possible cists |
| Concentric rings |  | Ringed monument showing ramparts & ditches<br>(open circuit(s) facing downslope) |
| Cup & ring(s) |   | Ring barrow or cairn showing ramparts & ditches |
| Cup & ring(s)<br>with outer cup(s) |  | Ringed monument<br>with<br>Incorporated mound(s) |
| Row of rings with one possibly offset |  | Linear cemetery |

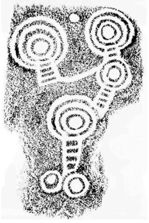
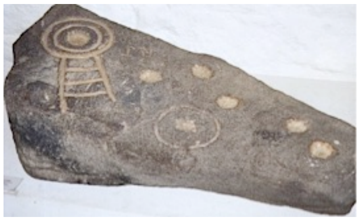
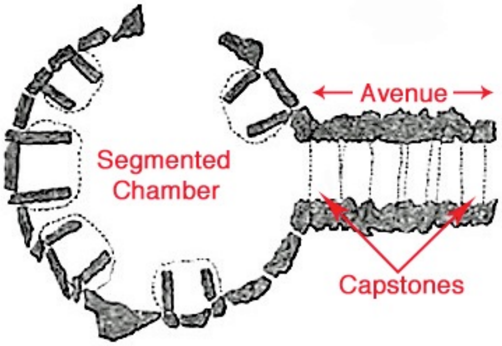
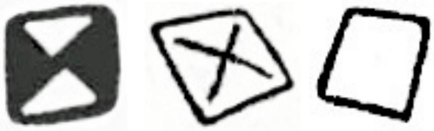
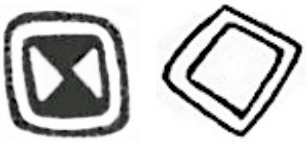
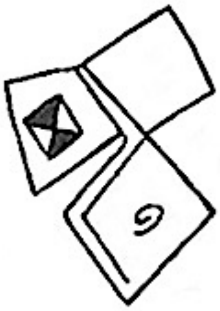
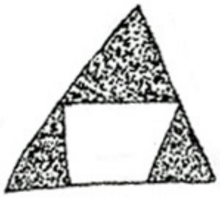
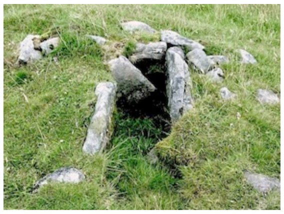
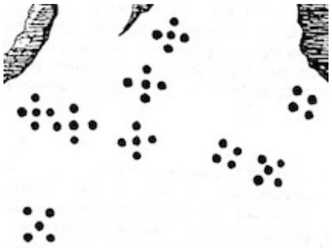
| | | |
|---|---|---|
| Cup & concentric rings with radiating groove(s) |  © Brian Kerr  | Ring barrow(s) with avenue(s)<br>(photo of motifs Buttony, Northumberland & Mag Grad of An Forradh & Tech Cormáic, Hill of Tara, County Meath, Ireland) |
| Cup & concentric rings with radiating groove |  | Kerb cairn with one or more kerbs, with or without avenue |
| Cups, rings & grooves |  | Kerb cairns with connecting avenues |
| Cup within a ring with radials or arcs |  | Passage mound sans kerb with flat top<br>(cup depicts an opening in the roof of the chamber) |
| Cup within a ring with radials inside a larger ring |   | Passage mound with kerb and flat top<br>(cup depicts an opening in the roof of the chamber)<br>(Contour plan of Dowth) |

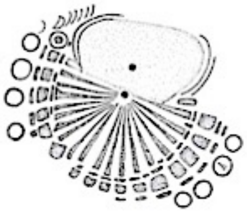
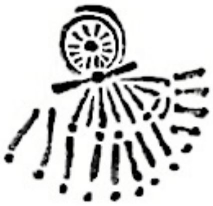
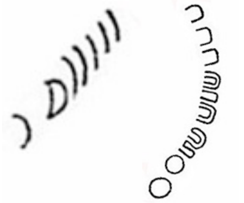
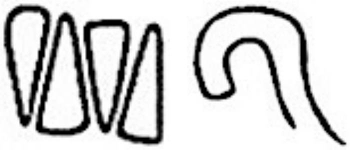
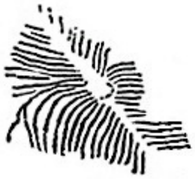
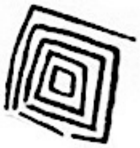
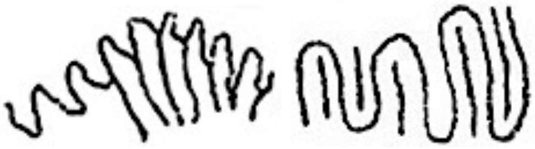
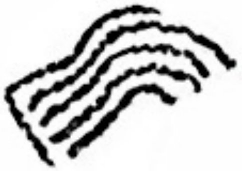
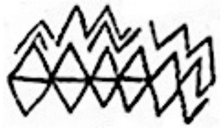
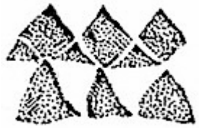
| | | |
|---|---|---|
| Cup within a ring with radiating arcs inside a larger ring |  | Passage mound with kerb & flat top<br>(cup depicts an opening in the roof of the chamber) |
| Cup within a ring, with radiating arcs inside a larger ring with outer arc(s) |  | Passage mound with kerb, flat top & incorporated mound(s)<br>(cup depicts an opening in the roof of the chamber) |
| Cup within a circle with radiating lines or arcs inside larger ring with outer arc |   | Passage mound with kerb, flat top & ditch<br>(cup depicts an opening in the roof of the chamber)<br>(Photo of Site 2, Knowth) |
| Cup(s) & concentric rings with attached arcs |   | Passage mound and incorporated mound with kerbs showing contour lines<br>(cup depicts an opening in the roof of the chamber)<br>(contour plan, Newgrange) |
| Spiral |   | Mound sans kerb showing encircling construction ramp<br>(illus. of Silbury Hill) |

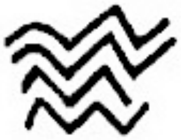
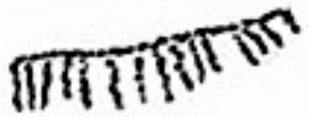
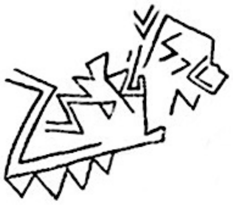
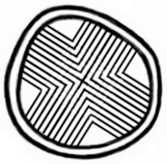
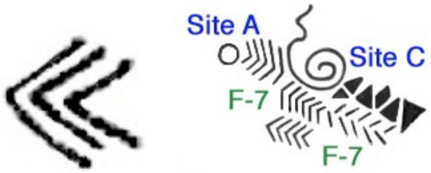
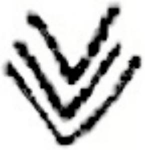
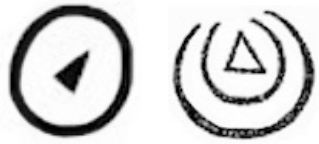
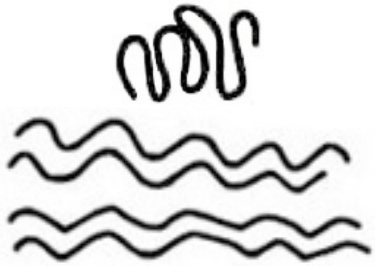
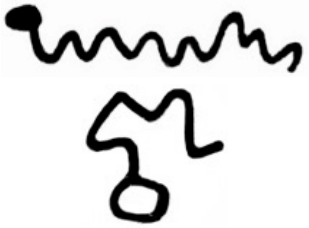
| | | |
|---|---|---|
| Radial |  | Mound |
| Radial (enclosed) |  | Mound with kerb or enclosing ditch |
| Arcs |  | String of monuments<br>(possibly side view of mounds) |
| Arcs |  | Single or double court tomb |
| Arcs (concentric) |  | Passage monument without capstones, showing contour lines |
| Arcs (concentric) | <br>after Eogan 1990<br><br>after Eogan 1990 | Lines marking the movement of the sun and/or moon. Used in conjunction with a gnomon(s) |
| Arc(s) with cup(s) & ring(s) |  | Ring barrow(s) with partial outer enclosure |
| Arcs (concentric) with or without cup |  | Open-sided monument with or without cist<br>(open side facing downslope) |
| Scalariform |  | Long barrow |

| | | |
|---|---|---|
| Scalariform (enclosed) |  | Long barrow with a partial or complete enclosing ditch |
| Cups enclosed within oval(s) or rings |  | Long barrow showing individual cairns |
| Quadrangular shapes with projection, with or without wavy lines |  | Cairn or tumulus |
| Assorted shapes with concentric lines and projections |  | Cairn or tumulus showing contour lines |
| Oval with rows of inner cups, rings, arcs or offset |  | Chambered long barrow showing chambers (left) & sloping sides (right) |
| Rectilinear design with bend |  Capstones<br>Orthostats<br>Capstones<br>Orthostats<br>Plan of des Pierres Plates | Allée couverte coudée or bent dolmen showing orthostats and capstones |

| | | |
|---|---|---|
| Rectilinear design |   | Dolmen showing capstones and orthostats |
| Multiple cups enclosed by rings or other shapes |   © Brian Kerr<br>© Brian Kerr<br>© Brian Kerr<br>© Brian Kerr | Burial plots showing cists with stone enclosures |
| Segmented rings with cups |    Burnt Bones and Skulls<br>D<br>C<br>4<br>B<br>3<br>2<br>A<br>1<br>Burnt Bones<br>E<br>Burnt Bones<br>F<br>Entrance<br>© McAdam c. 1855   | Radially segmented enclosure showing cists<br>(Top: Or. L 1 of Cairn T, Loughcrew & plan of The Giant's Ring)<br>(Bottom: K 18 Back, Newgrange & plan of Townleyhall) |

| | | |
|---|---|---|
| Cup and rings with attached vertical & horizontal grooves |    | Cairn with outer enclosures and capped 'avenues' (Plan of St. Hilier Tumulus, 'Rude Stone Monuments in All Countries' by James Fergusson, 1872, page 51) |
| Quadrangle with or without shaded triangles |  | Timber structure with or without roofline |
| Quadrangle with or without shaded triangles within a larger quadrangle |  | Timber structure with or without roofline showing porch |
| Quadrangle(s) |  | Enclosure(s) with or without inner structures |
| Triangle with shaded areas enclosing a quadrangle |   | Passage cairn showing entrance (peck marks depict the surrounding stones) |
| Dominos |  | Grouping of cists |

| | | |
|---|---|---|
| Radiating lines with cups and/or rings | <br> | Lunar and/or solar dial |
| Arcs & rings |  | Lunar phases |
| Elongated triangle(s) or crozier(s) |  | Menhirs |
| Scalariform |  | Ridge |
| Concentric quadrangles |  | Ridge |
| Curvilinear design |  | Bank or slope |
| Curved parallel lines closed at one end |  | Bank or slope |
| Lozenges | <br><br> | Bank, slope or hillock<br>(a stylized depiction of the angular stones forming the features)<br>(photo of stones along the River Boyne) |

| | | |
|---|---|---|
| Zigzags |  | Bank or slope |
| Scalariform |  | Bank or slope |
| Cluster of rectilinear shapes |  | Cluster of features in the landscape<br>(a stylized depiction of the angular stones forming the features) |
| Chevrons |  | Mound with rampart(s) showing contour lines |
| Chevrons |  | Bank or slope |
| Chevrons<br>(inverted) |  | Gullies |
| Triangle within a ring |  | Profile of pyramidal standing stone within an enclosure |
| Serpentiform |  | River or stream |
| Serpentiform with cup or ring |  | Stream leading to or from a pond |

# Conclusion

Whether with regards to the art and even the monuments, words like ‘enigma’ and ‘mystery’ keep cropping up. However, the only ‘enigma’ is that created by the archaeologists, with the ‘mystery’ being that they’ve been unable to interpret the panels of art over the past 300 years. Like humans today, the people of the Neolithic and Early Bronze Age did things in a logical and well-thought-out manner. Had they not done so, they never would have developed intellectually to the point of being able to construct sites such as Knowth, Newgrange and Stonehenge. Yet, in attempting to understand our ancestors, archaeologists have become so focused on the data they’ve amassed to support their oft times fanciful speculations, they fail to apply any degree of commonsense and logic in order to solve the ‘enigmas’ and ‘mysteries’ they inexplicably believe exist. The principle of ‘Occam’s Razor’ states that, ‘entities must not be multiplied beyond necessity’. In other words, the simplest explanation tends to be correct, a concept that appears to be lost on many archaeologists.

Though radiocarbon dating, and to some extent the ‘ancient texts’, can be valuable tools in our understanding of the monuments, if the data does not agree with the ‘historical records’, which are quite literally carved in stone, i.e., the panels of ‘maps’, then there’s a serious issue with the data. By knowing what the symbols represent, archaeologists using the latest in geo-prospecting technology, will be able to match panels to their respective sites and monuments, which over time will yield a wealth of artifacts and remains, that will ultimately write and in many cases rewrite history.

In view of the evidence presented in this paper, as well as ‘Orthostat: The Mound of the Hostages’ and ‘Petroglyphs: The Bend of the Boyne’, the historic value of the petroglyphs is incalculable. Therefore, it is of paramount importance that every effort be made through legislation and government funding, to preserve, restore and protect both the art and the monuments for future generations.

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